

A MODEL FOR THE DEVELOPMENT OF DISORDERED EATING
AMONG LESBIANS

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It has only been in recent years that eating disorder researchers have begun focusing on sexual orientation as a variable that may affect prevalence rates. Heeding the call for studies that extend beyond identification of fixed eating disorder risk factors (e.g., gender), this study was designed to explore factors that contribute to the development of disordered eating among lesbians. In this study, a hypothesized Lesbian Model of Disordered Eating was tested using structural equation modeling. Lesbian Sexual Identity and Social Supports were hypothesized to positively influence Psychological Health. In addition, Internalization of U.S. Societal Norms of beauty and attractiveness was hypothesized to negatively affect Psychological Health. Psychological Health, in turn, was hypothesized to negatively influence Body Image Concerns. Body Image Concerns was then hypothesized to positively affect Disordered Eating. The fit of the model was evaluated and one of the hypothesized pathways, Internalization of Norms was moved to directly predict Body Image Concerns. After adjusting the model, the model accounted for 54% of the variance in disordered eating. Most notably, the results highlight the potential affects of adopting a positive lesbian identity on disordered eating and underscore the importance of including sexual identity as a demographic variable in studies of body image and disordered eating. Implications for counseling and directions for future research are discussed.

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TABLE OF CONTENTS

	Page
ACKNOWLEDGMENTS	iii
LIST OF TABLES	v
LIST OF ILLUSTRATIONS.....	vi
Chapter	
1. INTRODUCTION	1
Minority Sexual Identity Development	
Eating Disorders	
Eating Disorders and Sexual Orientation	
The Proposed Model of Disordered Eating Among Lesbians	
2. METHOD.....	41
3. RESULTS.....	61
4. DISCUSSION.....	92
APPENDIX A.....	118
REFERENCE LIST	133

LIST OF TABLES

Table	Page
1. Sexual Identity Development Scale (SIDS) Items and Standardized Factor Loadings	76
2. Descriptive Statistics for all Observed Variables for Total Sample and Sexuality Groups	77
3. Correlation Matrix for Indicator Variables for Total Sample	80
4. Correlation Matrix for Indicator Variables for Heterosexuals	82
5. Correlation Matrix for Indicator Variables for Lesbians	84
6. Standardized Parameter Estimates for the Measurement Model	86
7. Goodness of Fit Indices for the Disordered Eating Models	87

LIST OF ILLUSTRATIONS

Figure	Page
1. Hypothesized Lesbian Model of Disordered Eating	88
2. Lesbian Model of Disordered Eating	89
3. Heterosexual Model of Disordered Eating 1	90
4. Heterosexual Model of Disordered Eating 2	91

CHAPTER I

INTRODUCTION

Women in contemporary American society face strong sociocultural pressures to attain and maintain the cultural ideals of beauty and thinness (Striegel-Moore, Silberstein, & Rodin, 1986). Dworkin (1989) suggested that internalization of unrealistic beauty ideals is likely to result in body dissatisfaction when women fail to measure up to societal standards. Internalization of these powerful norms has also been suggested to increase a woman's risk for the development of an eating disorder such as anorexia or bulimia nervosa (Hesse-Biber, 1989). Not all women, though, are considered to be at-risk. Striegel-Moore et al. (1986) suggested that women who live in certain subcultures, such as lesbian women, may be at less of a risk for developing an eating disorder due to differences in the importance of placed on the attainment of the societal standards of weight and attractiveness. As a result, investigators have begun to examine sexuality an important variable (e.g., Beren, Hayden, Wilfley, & Grilo, 1996; Herzog, Newman, Yeh, & Warshaw, 1992; Siever, 1994) in studies of body dissatisfaction and eating disorders. Based partially on empirical evidence, researchers have suggested that identification as a lesbian may buffer a woman from body image disturbances (Brown, 1987; Bergeron & Senn, 1998) and eating disorders (Heffernan, 1994; Striegel-Moore et al., 1986).

To further explore this hypothesis, this comprehensive review of literature is divided into three major sections: (1) lesbian sexual identity development, (2) eating disorders, and (3) eating disorders and sexual orientation. More specifically, the literature

will be focused on investigations exploring the relationships among factors that contribute to body dissatisfaction and eating disorders, such as lesbian identity development, psychological health, and sociocultural factors.

Minority Sexual Identity Development

Traditionally, the late adolescent, young-adulthood years are a time of considerable movement in terms of sexual identity development (Erickson, 1968). Although confusion and instability may be present for most individuals during these times, achievement of a minority sexual identity (e.g., gay, lesbian, or bisexual) is a developmental process that is qualitatively distinct from the development of a heterosexual identity (Cass, 1996). A significant stressor for individuals with a minority sexual orientation includes coming out, the individual process of self-acceptance that progresses from initial denial to private self-acceptance to public self-disclosure of sexuality identity (Hanley-Hackenbruck, 1998). While major identity theorists (e.g., Erickson, 1968) view identity formation as an individual developmental process, it is also altered and affected by the social environment (Kroger, 1989). Unlike heterosexuals, homosexuals may face societal intolerance that has the potential to hinder healthy identity formation, and in extreme cases, contribute to significant psychopathology (Carrion & Lock, 1997).

Lesbian identity development

A lesbian identity has been defined as a woman's consistent self-description across situations as having primary sexual, affectional, and relational ties with other women (Brown, 1995). Throughout the lifespan, however, this self-identity may or may

not be congruent with overt behavior. This ambiguity in the definition of sexual orientation, as either gay or lesbian, has been a challenge and limitation for researchers since the 1860s, when interest in sexual orientation began (Sell, 1997).

To this date, however, a uniform conceptual definition does not exist for operationally defining sexual orientation, which limits comparisons among studies (Sell, 1997). The most influential scale proposed for the measurement of homosexuality was developed by Kinsey and colleagues (Kinsey, Pomeroy, & Martin, 1948; Kinsey, Pomeroy, Martin, & Gebhard, 1953). Kinsey et al. (1948, 1953) proposed a continuum, a 7-point Likert scale with anchors of exclusive heterosexuality and exclusive homosexuality. Even this widely used measure, however, has been criticized for not being a true continuum (because it has 7 points) and for combining both overt sexual experience and psychosexual reactions into one scale. In an effort to separate these two independent values, researchers have separated the dimensions into two separate continuums, most commonly assessing sexual behavior and sexual fantasies (Sell, 1997).

To account for inconsistencies between attitudes and behaviors, Golden (1987) proposed a multidimensional model of sexual orientation which encompasses and highlights the distinction among sexual identity (e.g., I am a lesbian), sexual behavior (e.g., I have sex with women), and community participation (e.g., I am a member of the lesbian community). To test Golden's conceptualization and further describe the heterogeneity of women's sexual orientation, Morris and Rothblum (1999) asserted that two additional dimensions, the extent of disclosure of sexual orientation and the length of time of self-identity as lesbian are also important and distinct aspects of sexual

orientation. To empirically test their hypothesis, these authors examined the relationships among the aforementioned 5 aspects of sexual orientation in a sample of women who agreed to complete a lesbian questionnaire. Overall, Morris and Rothblum found significant, but low, positive correlations among sexual orientation, years out, disclosure, sexual experience, and lesbian activity participation. Amongst all the variables, the strongest association was found between sexual identity and sexual experiences ($r = .57$). Low correlations were found between sexual identity and outness/disclosure ($r = .32$) and lesbian activities ($r = .20$). The results of this study support Golden's assertion that sexual orientation is multidimensional and Morris and Rothblum's hypothesis that self-identification as a lesbian (e.g., "I am a lesbian") does not have the same meaning for all gay women. For some it may mean, for example, being out to friends and involved with the gay community, whereas for others it may only mean having women as sexual partners. Applying this idea to future research, it would seem that a multidimensional assessment of sexual orientation is warranted to enhance the reliability and validity of study outcomes.

Models of sexual identity development

Although research on the concepts of sexual orientation and sexual identity is helpful for Western mental health practitioners to better understand client issues, anthropological and historical evidence suggests that these concepts do not exist in many non-Western cultures. Cass (1996) argued that a social constructionist framework be adopted for the study of lesbian and gay identity formation to account for the notion that most psychological functioning and human behavior are specific to the sociocultural

environment in which they occur, and not solely a result of inner psychological mechanisms which can be found universally in all beings. From a social constructionist perspective, behavior is viewed as the product of the relationship between an individual with biological and psychological capacities and one's sociocultural environment through a process of reciprocal, simultaneous interaction. Within this psychological perspective, questions for study focus on the processes that allow people to move from a third-person (e.g., "some people are lesbian") to a first-person (e.g., "I am a lesbian") approach to homosexuality (Cass, 1996).

The majority of sexual orientation researchers have used stage models to describe changes in the process of minority sexual identity development (e.g., Cass, 1979; Jordan & Deluty, 1998). All stage models are linear and orderly. In addition, they suggest endpoints or completion of the identity process, and have utility as guides for mapping interventions (Parks, 1999). Most of the widely accepted stage theories involve two parallel processes: (1) an internal identity development, which is the development of a self-definition; and (2) an external development of attitudes and behaviors congruent with an internal identity (i.e., coming out) (Jordan & Deluty, 1998). Common among all the models are elements of dealing with (a) one's internalized homophobia — an internalization of negative societal attitudes and assumptions about homosexuality and (b) one's reaction to societal homonegativism — sexist and phobic components of prejudice (Jordan & Deluty, 1998).

Arguably one of the most widely recognized stage models of gay and lesbian sexual identity development was developed by Cass (1979, 1996). Her developmental

model contains six stages, through which movement is based on cognitive dissonance. Each stage contains more than one potential pathway or trajectory, which can be either negative or positive. It is assumed that before the first stage, all individuals begin with a heterosexual view of themselves.

Stage 1, called identity confusion, involves an awareness that information about gay/lesbian people has personal meaning and/or relevance. The issues of this stage include coping with the confusion about who one is, resolving the potential inconsistency of attaching homosexual meaning to one's own behavior, and reducing discomfort that may arise if this meaning is felt as undesirable. In Stage 2, identity comparison, an individual may shift his/her self-image to may be homosexual and may not be heterosexual. When considering the implication of this new shift in identity, feelings of alienation or not belonging may be common. Stage 3, identity tolerance, is characterized by feelings of probably gay and is associated with a lower sense of confusion and/or turmoil than the previous stage.

In Stage 4, identity acceptance, individuals may still be passing as straight, but are in the process of attaining private acceptance; only tenuous internalization of the inner self as gay or lesbian has occurred. Stage 5, identity pride, is characterized by immersion in a gay/lesbian community upon recognition of the desire to fully express a gay/lesbian identity within a rejecting sociocultural environment. As a strategy for managing incongruence between self-acceptance and societal rejection, valuing other gays/lesbians above heterosexuals may occur. In Stage 6, identity synthesis, integration of one's sexual identity into the whole self occurs. Feelings of anger, alienation, and

frustration are decreased and replaced with a sense of belonging to the world at large, which reinforces self-esteem. According to Cass, the desired "endpoints" of this stage are the achievement of "wholeness and personhood."

The Cass (1979) model has also served as the basis for many of the newer sexual identity models focused on specific populations, such as adolescents (Carrion & Lock, 1997) and male and female college students (Meyer & Schwitzer, 1999). Since its development, critics of the Cass model have noted greater variability in stage progression (Parks, 1999), and asserted that sexual orientation development is a less-predictable, life-long process (Morris & Rothblum, 1999). For example, Parks (1999) conducted a qualitative investigation of 31 self-identified lesbians from 3 different generations. Analysis of interviews supported the notion of a wide variability in the sequence, timing, and outcome of developmental events. Regardless of the variability noted, however, Park's investigation revealed a developmental trend similar to the Cass model. Common among all women was the same internal progression from awareness (internal recognition of feelings), to exploration (beginning and undefined sexual and social contact), to immersion (high exposure and involvement with lesbian community), and to synthesis (a defined identity and more selective activities) (Parks, 1999).

Lesbian identity development and stressors

Sexual minorities, as a result of stigmatization, experience minority stress, the culturally ascribed inferior status for particular groups that can precipitate uncontrollable negative life events (Brooks, 1981). Furthermore, Brooks suggested that gay women are subject to double minority status in that that they may experience more negative life

events as a result of living in a sexist, homophobic, and heterosexist society. A cautious interpretation of this assertion is necessary, however, because although minority status has the potential to lead to negative health outcomes, it is not necessarily inherent that all lesbians experience negative health consequences (Bradford, Ryan, & Rothblum, 1994). Although quantitative empirical research directly exploring relationships among psychosocial factors (e.g., stressors) and mental health in lesbians has been limited (DiPlacido, 1998), qualitative explorations have, in general, found support for the role of social networks in the buffering of stress.

Falco (1996) identified common stressors faced by the majority of lesbians that have the potential to affect psychological health, including the disclosure of one's sexual identity to others. For lesbians, disclosure choices are continual; the process of coming out is not a one time event, as one must continually decide who, if, and when to tell. Relatedly, non-disclosure can negatively impact psychological health, due to a generalization of censoring one's words and behaviors and being in a constant state of vigilance. Possible rigidity may develop when the self is constricted, and self-esteem may be lowered when hidden aspects of the self are perceived as bad. Falco's review of literature suggested that greater disclosure of one's sexuality to others is associated with greater psychological health. Specifically, Jordan and Deluty (1998) found relationships between greater self-disclosure and lower anxiety, positive affectivity, enhanced self-esteem, more social support and involvement in the gay community.

Lack of social support is a second major stressor for lesbians (Falco, 1996). Stressors may seem greater when one feels that a limited number of people understand,

and this sense of alienation may be especially salient for those who lack a strong sense of identity or have little contact with the lesbian community. In addition, the absence of positive role models and cultural history (myths, traditions, symbols) may also be contributing sources of stress among lesbians (Falco, 1996). Zea, Reisen, and Poppen (1999), using a sample of Latino lesbians and gays, investigated relationships among social support, self-esteem, positive identification with a social group (i.e., the Latino gay and lesbian community), and depression. Zea et al.'s results supported Falco's hypotheses - higher perceived social support and private collective self-esteem (an individual's evaluation of their social group) were related to lower depression.

Another significant stressor identified by Falco (1996) is internalized homophobia. Shidlo (1994) defined internalized homophobia as one's negative attitude and affect towards homosexuality in other persons and toward homosexual features in oneself, including same-gender sexual feelings, behaviors, and intimate relationships, and self-labeling as gay, lesbian, or bisexual. As a normal part of sexual identity development, lesbians and gays, instead of seeing the prejudicial and discriminative forces that promote and reinforce heterosexism in our culture, believe something is inherently wrong with them (Pitman, 1999). Internalized homophobia, which may be conscious or unconscious, has been suggested to result in a wide variety of behaviors, including but not limited to hiding from self and others, being afraid to tell others about one's sexuality, feeling superior (as opposed to inferior) to heterosexuals, experiencing discomfort in the company of other gay, lesbian, and bisexual individuals, and restricting intimate involvement to those who are unavailable. Researchers using samples of youths

(Lock & Steiner, 1999) and gay men (Shidlo, 1994), which has been extrapolated to lesbians, have suggested that internalized homophobia is a distinct and measurable factor (i.e., comfort with one's sexuality) that has been associated with overall psychological distress, depression, somatic symptoms, low self-esteem, loneliness, distrust, dietary disturbances, and eating disorders (Falco, 1996).

Although intuitively it would seem that, on the basis of one's sexuality, lesbians may experience more stress than their heterosexual counterparts, empirical research on lesbian health and the effects of stress on lesbian health has been virtually nonexistent (DiPlacido, 1998). In his review of the limited literature, DiPlacido found support for the importance of social networks for buffering lesbian families from the negative effects of stress. The studies reviewed, however, were based on qualitative research that did not directly explore the link between stress and mental health. As a result, much of the research on lesbian mental health and stress has been conducted indirectly, through explorations of negative health behaviors (e.g., alcohol consumption) (DiPlacido, 1998), which are reviewed in the next section.

Not all lesbians who deal with significant stressors, however, experience negative health outcomes (DiPlacido, 1998). From the general coping literature, it is widely accepted that social support and certain personality characteristics (e.g., hardiness and self-esteem) moderate the effects of stress (Cohen & Wills, 1985; DiPlacido, 1998). For example, DeLongis, Folkman, and Lazarus (1988) investigated the relationships among social support and self-esteem on psychosomatic and psychological problems after stressful days. Compared to individuals high in self-esteem and social support, those who

reported unsupportive relationships and low self-esteem were more likely to experience psychosomatic and psychological problems.

For lesbians, one such source of support is the gay and lesbian community, which can offer emotional support and information about practical living issues (DiPlacido, 1998). Furthermore, lesbians may also find support from their intimate partners. Relationship status is a variable that has been linked to well-being for both heterosexual and homosexual individuals (Kurdek, 1994).

In an effort to explore the impact of stressors on lesbians' health, DiPlacido is currently conducting a large scale (approx. 500 lesbians) study assessing external stressors (general and gay-related life events and daily hassles), internal stressors (self-concealment, emotional inhibition, internalized homophobia), social and personality moderating variables (hardiness, locus of control, social support, relationship satisfaction), health behaviors, and physical and psychological health outcomes. Although not yet completed, initial results from a pilot study indicated: (1) concealment of one's sexuality was positively correlated ($r = .49$, $p < .05$) with negative affect, and (2) experience of negative gay-related life events (e.g., disruption of family ties or verbal harassment) was not significantly correlated with psychological or physical health outcomes.

Furthermore, when dealing with significant internal and external stressors, lesbians have an opportunity to utilize and develop personality characteristics/assets (e.g., ego-strength and androgyny), which have been associated with better psychological health (Falco, 1996). The lesbian identity development process includes identification

with models not typically presented in society. Typically, this necessitates a strong degree of ego-strength, which may be heightened in the developmental process itself. Falco (1996) asserted that lesbians, compared with heterosexual women, have a greater tendency towards androgyny, which may contribute to greater psychological health.

Gay, lesbian, and bisexual (GLB) use of mental health services and psychopathology

Given the unique challenges of developing a minority sexual orientation, researchers have explored GLBs' use of mental health services and related psychopathology. As early as adolescence, researchers have found associations between minority sexual identity development and negative mental health outcomes in samples of GLB youths (Fergusson, Horwood, & Beutrais, 1999; Lock & Steiner, 1999). For instance, a 21-year birth cohort study conducted in New Zealand revealed that GLB youths, compared with their heterosexual peers, were at increased risk for major depression, generalized anxiety disorder, conduct disorder, nicotine dependence, other substance abuse/use, suicidal ideation and suicide attempts (Fergusson et al., 1999). These findings were corroborated by Lock and Steiner (1999), who found that GLB youths were at greater risk for mental health problems including depression, suicide, stress, anxiety, family problems, self-harm, life and social dissatisfaction, and loneliness than non-sexual minority youths.

Much of the literature exploring the mental health of lesbians has come from two large-scale, national studies, conducted with samples including 1925 lesbians by the National Institute of Mental Health (NIMH) (Bradford & Ryan, 1988; NIMH, 1987) and 1633 lesbians by the Fenway Community Health Center (Sorenson & Roberts, 1997).

Findings from both studies demonstrated that lesbians sought counseling at a greater rate than a general sample of women. Specifically, 73% (Bradford & Ryan, 1988) and 80% (Sorenson & Roberts, 1997) of these samples reported utilizing counseling services. Bradford and Ryan (1988) speculated that the high rate of mental health services utilization reflects lesbians' desire to optimize their lives in an unaccepting social environment. Among the reasons specified for seeking treatment, respondents reported the following issues: depression (50%), relationship/lover problems (44%), family problems (34%), stress/anxiety (31%), and being gay (21%) (Bradford & Ryan, 1988). Similarly, Sorenson and Roberts (1997) found the most frequently reported issues discussed in therapy were money (50%), work-related problems (33%), problems focusing on sexual orientation (7%), and alcohol/drugs (4%).

Another consistent finding from both studies was a high reported history of suicide attempts (18%) (Bradford & Ryan, 1988; Sorenson & Roberts, 1997). This figure is significantly higher than the reported rate for women in general, which is less than 10% (Bradford et al., 1994). Sorenson and Roberts (1997) highlighted the fact that more than 50% of these attempts occurred during adolescence, prior to "coming out," suggesting positive self-acceptance of one's lesbian identity is a positive factor in adult identity and well-being.

Although higher rates of alcoholism have also been reported among lesbians, (Sorenson & Roberts, 1997), the methodologies used in these studies have been criticized for biases in sample selection procedures (Mosbacher, 1988). In the NIMH study, a high rate of alcoholism in lesbians over 55 years-old was reported, and was speculated to have

been the result of cohort differences rather than due to increased usage with age. Older lesbians may have been more apt to develop alcoholism because bars were one of the only places where lesbians could “come out” socially several decades ago (Bradford & Ryan, 1988). Sorenson and Roberts (1997) found that 15% of the Boston sample of lesbians self-identified as alcoholic and 29% had attended Alcoholic Anonymous meetings. These researchers challenged the notion that alcohol use/abuse issues have been purported to be a significant concern in the daily lives of all lesbians, stating that overall, the majority of participants in their study reported feeling content and happy as lesbians (Sorenson & Roberts, 1997).

With respect to rates for clinical diagnoses of mental illnesses (beyond alcoholism and suicidality) among lesbians, the literature is limited (Sorenson & Roberts, 1997). Rothblum (1990) conducted an investigation of depression among lesbians and found no difference in rates of depression between lesbians and non-lesbians, although the mitigating factors reported were different (e.g., lesbians cited lack of support and discrimination whereas non-lesbians cited marriage and job-related difficulties). Similarly, no differences in rates of bipolar disorder have been found (Rothblum, 1990; NIMH, 1987). In addition, results of the NIMH study suggested that other clinical disorders were also seen with similar frequencies (e.g., psychotic, anxiety, somatoform, sexual, factitious, adjustment, sleep, personality, and most substance abuse disorders).

From this review of literature there is ample evidence to suggest that the process of developing a lesbian identity in a heterosexist society is filled with many stressors (Falco, 1996). These stressors may reflect both internal sources (e.g., internalized

homophobia, comfort with one's sexuality, and disclosure decisions) and external sources (e.g., lack of social support from family members and verbal abuse) (DiPlacido, 1998). Although research is limited, researchers suggest that these stressors may negatively impact lesbian psychological health, such as increased depression and anxiety, as well as decrease self-esteem (DiPlacido, 1998; Jordan & Deluty, 1998). Stress may also manifest in increased rates of alcoholism and suicidality among lesbians (Bradford & Ryan, 1988; Sorenson & Roberts, 1997). Evidence suggests, however, that greater involvement in the gay community and disclosure of one's identity may serve to buffer these negative psychological effects (Jordan & Deluty, 1988; Zea et al., 1999).

Eating Disorders

One category of mental illness that has received recent attention in the lesbian literature is eating disorders (e.g., Heffernan, 1994, 1996; Schneider, O'Leary, & Jenkins, 1995). This focus by lesbian researchers parallels a general trend for the increasing emphasis placed on the prevalence and etiology of eating disorders (specifically the two most common types, anorexia and bulimia nervosa) over the last 20 years (Garfinkel, 1995). In addition to anorexia and bulimia, another type of disordered eating is binge eating. Although no uniform definition exists, Fairburn and Cooper (1993) defined binge eating as consuming what other people would regard as an unusually large amount of food. Before presenting a review of the sexual orientation and eating disorder literature, an overall model for the understanding of eating disorders (EDs) and ED correlates will be presented.

Both anorexia and bulimia are characterized by excessive concern about becoming fat, which results in restricted eating behaviors (American Psychiatric Association, 1994). The disorders differ in the behavioral attempts utilized to reduce weight. Whereas anorexic patients typically starve themselves, bulimic patients typically binge eat and subsequently attempt to rid themselves of the food through a number of methods (e.g., vomiting, laxatives, or excessive exercise).

Epidemiological researchers providing prevalence rates for both disorders suggest that the distribution of anorexia and bulimia is not random among the population; adolescent girls and young women are the most vulnerable group. Although figures range from study to study based on diagnostic criteria and the demographics of the sample, it is estimated that 0.5%-1.0% of adolescent and young females meet the criteria for anorexia nervosa and 1.0-3.0% meet the criteria for bulimia (APA, 1994). Although the majority of diagnosed eating disorder cases are found in women, it is estimated that 5 to 10% of eating disorder patients are males (Anderson, 1995; Hoek, 1995).

Concerning the etiology of eating disorders, researchers have approached their studies from a variety of disciplines (e.g., medicine, psychiatry, psychology, and sociology), each using their own perspective to guide their research (Brownell & Fairburn, 1995). The result of this multidisciplinary approach has yielded data on the biological, physiological, psychological, and familial correlates of eating disorders (Cooper, 1995). With few exceptions, researchers have studied eating disorders retrospectively and without the inclusion of environmental and developmental factors that confront people during their lifespan (Attie & Brooks-Gunn, 1989). Given the

multifactorial antecedents of eating disorders (Cooper, 1995), it is not surprising that no one model has been widely accepted.

Within the psychological realm of research, however, researchers have postulated that eating disorders are a culture bound syndrome (DiNicola, 1990; Stice, 1994; Striegel-Moore et al., 1986; Wilfley & Rodin, 1995). This sociocultural perspective implies that the cultural meaning of eating and thinness has the potential to encourage the development of eating disorders. For instance, DiNicola (1990) cited evidence that eating disorders occur mostly in industrialized countries and are relatively uncommon in less affluent and technologically advanced countries.

From a sociocultural perspective, researchers have attempted to explain how social and cultural factors affect the development of eating disorders (Cooper, 1995; Stice, 1994; Stice & Shaw, 1994; Striegel-Moore et al., 1986). This line of research was been strongly impacted by the comprehensive review of literature conducted by Striegel-Moore et al. (1986). These authors discussed the link between the internalization of sociocultural mores about thinness and attractiveness and risk factors for bulimia. Citing their own previous research, these authors suggested that women with bulimia more strongly endorsed attitude statements relating to sociocultural values (e.g., attractiveness increases the likelihood of professional success) than non-bulimic women.

This research is consistent with Hesse-Biber s (1989) finding that college women who most strongly endorsed the cultural definition of body image were more at risk for developing disordered eating. In addition, Striegel-Moore et al. (1986) cited other research in which bulimic women aspired to achieve a thinner ideal body size than did

normal controls. Adopting a developmental perspective, Striegel-Moore et al. (1986) asserted that from a very early age, young girls are exposed to diverse agents of socialization (e.g., mass media, families, and schools) that suggest appearance is more salient for them than for boys.

Perhaps the most detailed and specific sociocultural explanation was developed by Stice (1994), who proposed a theoretical model to describe how sociocultural factors have the potential to precipitate and maintain disordered eating patterns, specifically bulimia. Although not all the pathways in the model have been empirically validated, the hypothesized linkages have been based on correlational data. The model begins with the premise that family, friends, and the media are the primary messengers of social and cultural standards of appearance and body ideals for women. Furthermore, these sources transmit the importance of thinness and attractiveness and influence the degree to which a woman internalizes sociocultural pressures.

Citing past research, Stice (1994) suggested that low self-esteem (Mintz & Betz, 1988) and a weak sense of identity (Schupak-Neuberg & Nemeroff, 1993) increase a woman's susceptibility to internalization of the cultural ideal. Furthermore, Stice (1994) asserted that heightened internalization of sociocultural pressures may be mediated by body dissatisfaction. Meaning, a woman's dissatisfaction with her body suggests that she is comparing herself to an internalized ideal.

Some of the pathways in Stice's (1994) model were supported by recent correlational research by Wiederman and Pryor (2000). These authors investigated the relationships among drive for thinness (preoccupation with dieting and weight, fear of

weight gain), depression, bulimia, and body dissatisfaction among samples of women who met the diagnostic criteria for anorexia and bulimia as well as with female college students enrolled in introductory psychology classes. For all participants, greater body dissatisfaction was related to increased depression, bulimia, and drive for thinness. Hierarchical multiple regression analyses demonstrated that for the clinical subsamples, depression and drive for thinness were significant predictors of body dissatisfaction, beyond any effects due to bulimia. For the students, drive for thinness was a significant predictor of body dissatisfaction beyond the effects of bulimia or depressive affect. Overall, the findings suggested that among both women with and without diagnosed eating disorders, drive for thinness appears to be a key element of body dissatisfaction. The authors suggested that drive for thinness may be an indication of having incorporated perceived social pressures to attain a body approximating the cultural ideal (Wiederman & Pryor, 2000).

As the model by Stice (1994) and other body image researchers (e.g., Attie & Brooks-Gunn, 1989; Rosen, 1990) have suggested, body dissatisfaction is an important and necessary, although not a sufficient, component in the development of eating disorders (Grogan, 1999). Consistently, body image disturbance has been demonstrated in non-eating disordered women (Mazzeo, 1999) as well. In her review of the body image literature, Grogan (1999) concluded that most women in the United States, Britain, and Australia, report dissatisfaction with their weight and shape. Hence, an overview of the concept of body dissatisfaction, as well as demographic correlates will be presented next.

One of the challenges of studying body image is a lack of solidarity on an agreed upon operational definition of body image and, subsequently, a uniform method for its assessment (Gleaves, Williamson, Eberenz, Sebastian, & Barker, 1995; Grogan, 1999; Mazzeo, 1999). Commonly used methods of assessment include using the following five methods: (1) the silhouette technique, (2) the body estimation technique, (3) semi- or unstructured-interviews, (4) behavioral indicators, and (5) questionnaires addressing body image attitude and body image preoccupation. The silhouette technique yields a quantitative measure of the degree and direction of body dissatisfaction, as reflected by the reported discrepancy between an individual's choice of silhouettes representing his/her own body size and his/her ideal body size. Similarly, the body estimation technique (of either parts or the whole) also taps perceptual discrepancies between one's perceived and real body size. Semi- or unstructured-interviews typically yield qualitative data and allow participants to freely express their experience of body satisfaction. Unlike the previously aforementioned cognitive measures, identification of behavioral indicators (e.g., use of dieting, exercise, or plastic surgery) have also been utilized as indicators of body shape/weight concern.

The most common body image measurement technique is the self-report questionnaire, which may assess body image attitude (level of satisfaction with one's shape) and/or body image preoccupation (the strength of negative body image attitudes) (Mazzeo, 1999). Examples of popular measures include the Body Cathexis Scale (Secourd & Jourard, 1953), the Body Satisfaction Scale (a subscale on the Eating Disorders Inventory; Garner, Olmstead, & Polivy, 1983), and the Body Shape

Questionnaire – Revised (BSQ-R-10; Mazzeo, 1999). Mazzeo (1999) found that the BSQ-R-10, a measure of body image preoccupation, yielded a stronger relationship with disordered eating than the relationship between measures of body image attitudes and disordered eating. This finding suggests that a measure of body image preoccupation, such as the BSQ-R-10, may be the best method for discriminating between women who do and do not engage in disordered eating.

Body image researchers have largely investigated the construct by comparing groups of individuals differing in age and ethnicity (Grogan, 1999; Striegel-Moore et al. 1986). With respect to age, researchers have suggested that body dissatisfaction changes throughout the lifespan with certain crucial periods of heightened dissatisfaction. For instance, researchers have consistently found that most young women report dissatisfaction with their body shape and size (Grogan, 1999). During puberty, undoubtedly one of the most stressful times in the lifespan, the body undergoes physical, social, and cognitive changes, all of which have the potential to affect body image and weight-related concerns. Striegel-Moore et al. (1986) suggested that, although young children are exposed to and may internalize the pervasive societal messages regarding the beauty ideal of thinness, it is not usually until puberty when awareness of physical changes and frequency of dieting increases. For young women, body image concerns may peak during this time period due to physical changes that move girls further away from the thin ideal (Striegel-Moore et al., 1986).

The cognitive themes of adolescent development (e.g., interpersonal relationships, self-concept, and autonomy) are continued into the adult years, and are still experienced

differentially by gender (Striegel-Moore et al., 1986). The authors suggested that the persistent sociocultural emphasis placed on females' appearance, in addition to years of internalization of the ideal female body image, contribute to negative self-images. Although these theorists reviewed research largely focused on samples of high school girls and college-aged women, they asserted that throughout the lifespan, many women continue to struggle with weight, both physically and psychologically. Specifically, Striegel-Moore et al. (1986) hypothesized that pregnancy and menopause are two other potentially stressful periods that may influence eating, body image, and weight-related concerns for women (Striegel-Moore et al., 1986).

Grogan (1999) stated that research on body image and aging has been confounded by the methodological limitations inherent in cross-sectional research designs. Conducting cross-sectional research introduces the confound of different cohort's experiences of cultural pressures. For example, historical changes in stereotypes of attractiveness may be more of a predictor of body image concerns than age. In addition, cohort differences may influence the internalization of particular role models, which is likely to influence body image ideals (Grogan, 1999).

With respect to ethnicity and body image concerns, differing attitudes about body size have been documented amongst different ethnic groups in Western countries (Grogan, 1999; Molloy & Herzberger, 1998). In her review of the body image literature, Grogan (1999) concluded that body dissatisfaction is the most common in American and British white women, and the least common amongst other comparison groups of Hispanics, Asians, and African Americans. Furthermore, these differences may be

attributable to the ways in which obesity and being overweight are viewed. For example, Grogan suggested that African-American culture positively regards plumpness in women and represents a voluptuous female body as powerful and sexual. The hypothesis that particular subgroups may be better protected from body image distortions was supported by a recent investigation comparing body image and self-esteem between African-American and Caucasian women (Molloy & Herzberger, 1998). These researchers found that African-American women reported a more positive body image, higher levels of self-esteem, and were more likely to describe themselves with masculine traits than Caucasian women.

In summary, eating disorders are a significant health problem among women, especially adolescent and young adults (Striegel-Moore et al., 1986). Given that a multidisciplinary approach to the study of eating disorders has yielded biological, psychological, physiological, and familial correlates of eating disorders, it is not surprising that no one model of eating disorders has been widely accepted (Cooper, 1995). The models to explain the etiology of EDs presented in this review have implicated a number of variables and suggested pathways in the development of EDs and disordered eating, including negative affect regulation (Heffernan, 1996), internalization of sociocultural standards of beauty (Striegel-Moore et al., 1986), and body dissatisfaction (Stice, 1994).

Eating Disorders and Sexual Orientation

Research into the relationship between sexual orientation and prevalence of eating disorders, most notably bulimia nervosa and binge eating behavior, has revealed

differences among men (Schneider et al., 1995) and women (Heffernan, 1994). For men, homosexuals exhibit higher rates of bulimia nervosa than do heterosexuals (Heffernan, 1994). In addition, Schneider et al. (1995) found that gay men, similar to heterosexual women, reported a greater likelihood of binge eating and engaging in weight control activities, less control over eating, and more over-concern with their body shape and weight when compared with lesbian women and heterosexual men. Hence, although men are typically at a lower risk for the development of an eating disorder than women (Hoek, 1995), the results of the aforementioned studies suggest that being a gay man may be a risk-factor.

Brown (1987) presented anecdotal evidence suggesting that lesbians may be underrepresented among women who develop eating disorders, potentially as a result of their decreased investment in societal norms of attractiveness. Empirical evidence, however, has been equivocal (Heffernan, 1994). For example, Schneider et al. (1995) found that although lesbians and heterosexual women were similar in obesity, lesbians were less concerned about their weight and binged less than heterosexual women. These findings are in contrast with others who found that lesbians dieted less but binge-ate more than heterosexual women (Striegel-Moore, Tucker, & Hsu, 1990) and were three times more likely to be binge-eaters than dieters (Bradford & Ryan, 1987). Schneider et al. (1995) suggested that the conflicting results were found because the women in their sample were more heterogeneous than those from the other samples.

More recently, Heffernan (1996) conducted a study estimating the rates of bulimia nervosa and binge eating among 203 lesbians. One of the aims of her study was to better

understand the high rates of binge eating and low rates of dieting found by other researchers (e.g., Bradford & Ryan, 1987). Based on the views that binge eating may be an attempt to escape negative self-awareness (Striegel-Moore, Silberstein, & Rodin, 1993) or a response to stress when coping strategies are inadequate or social supports are lacking (Cattanach & Rodin, 1988; Shatford & Evans, 1986), Heffernan explored whether binge eating among lesbians was more strongly related to distraction from, and consolation for, negative feelings and low self-esteem, than body dissatisfaction and dieting.

Heffernan (1996) found that her sample of lesbian women reported similar rates of dieting and bulimia nervosa as heterosexual women. In addition, the lesbians reported binge eating disorder rates 2.5 times higher than previously estimated rates. Given the similar rates of eating disorders among lesbians and heterosexual women, the author concluded that gender may trump sexual orientation in terms of a risk factor for their development. Overall, Heffernan (1996) found no support for the hypothesis that lesbians would be at decreased risk due to lower body dissatisfaction and dieting rates. In fact, eating as negative affect regulation, as opposed to body dissatisfaction or dieting, was the strongest predictor of binge eating.

As sociocultural theorists have suggested, internalization of societal norms of beauty has been found to relate significantly to body image disturbances (Striegel-Moore et al., 1986; Wiederman & Pryor, 2000). Furthermore, Heffernan (1994) suggested that differences in the values placed upon the importance of physical appearance by lesbians as a group, as compared with heterosexual women, may mediate their risk for eating

problems. Acceptance of the thin body ideal for contemporary American women is founded on a heterosexually-based definition of attractiveness (Asher & Asher, 1999). Hesse-Biber (1989) suggested that heterosexual women may subscribe to the pursuit of thinness to appear more sexually attractive to men. Hence, men are either directly or indirectly implicated in the propagation of current beauty ideals. On a more indirect level, the patriarchal order that shapes popular tastes and standards is also likely to be influencing women's body image ideals.

Intuitively, it would seem that women who choose or prefer other women as their sexual partners might be less apt to subscribe or rigidly adhere to heterosexual males' body image ideals. Mara (1983) suggested that because loving another woman's body is like loving a body like her own, attraction to another woman should lead to greater acceptance of her own body. As a result, lesbians may be at a lower risk for body dissatisfaction, and thus disordered eating. A qualitative investigation of body dissatisfaction among lesbian college students by Beren, Hayden, Wilfley, and Striegel-Moore (1997) provided support for this hypothesis. These researchers found an overall theme that intimate involvement with women positively influenced their participants' feelings about their own bodies. In addition, the women in their study also reported that their partners' acceptance of and attraction to their own bodies influenced their own body acceptance of their own bodies.

Accordingly, recent investigators have tested the hypotheses that being lesbian may protect a woman from societal pressures to attain and maintain the thin ideal, as well as the notion that being a lesbian may contribute to a healthy body image (Bergeron &

Senn, 1998; Siever, 1994). For example, compared with heterosexual women, lesbians reported less body dissatisfaction (Siever, 1994), higher ideal weights (Bergeron & Senn, 1998; Herzog et al., 1992), more positive attitudes about strength and fitness (Bergeron & Senn, 1998), and did not diet as often (Herzog et al., 1992). Other researchers, however, have found no differences between lesbians and heterosexual women on measures of body esteem and disordered eating (Striegel-Moore, Tucker, & Hsu, 1990) and that gender influenced weight concerns and disordered eating more than sexual orientation (Brand, Rothbloom, & Solomon, 1992).

Given the aforementioned equivocal findings regarding the relationships among body image and eating concerns with respect to sexual orientation, two opposing theoretical arguments have been proposed to explain how the role of sexual orientation may affect body image. On one end of the debate is a theory espoused by Brown (1987), who posited that being a lesbian should mitigate male-induced pressures to be thin. Her theory has been used by empirical researchers to explain the findings regarding healthier body-image attitudes and eating behaviors espoused by lesbians. Conversely, Dworkin (1989) suggested that gender, specifically being female, trumps any protective effects that may be inherent in one's self-identification as a lesbian. Accordingly, Dworkin's theory has been used to explain why some researchers have found that lesbians reported similar body image and eating related concerns as heterosexual women.

Brown (1987) presented a number of theoretical arguments to explain why lesbians may be less affected by cultural prescriptions of the ideal. Notably, being a lesbian and accepting one's sexual orientation precedes appreciation of one's body. She

asserted that lesbian subculture values pushing the limits of patriarchal control. Specifically, lesbian culture challenges beliefs that women must take up less space, be less powerful of a presence, and focus on nurturing others over themselves. She related lesbians' plight to the plight of fat activists who challenge the denigration of fat women — both break cultural rules and models of feminine beauty. Furthermore, Brown asserted that among lesbians, dieting is unacceptable because it is seen as buying into harmful societal norms of female appearance and behavior.

The notion that lesbian status may act as an immunizing factor has received some empirical support (Herzog et al., 1992; Siever, 1994). For example, Siever (1994), in a comparison of body dissatisfaction between lesbian and heterosexual women, found that lesbians reported lower dissatisfaction with their bodies than heterosexual women. In addition, the lesbians reported that physical attractiveness was not an important evaluative factor in their choice of partners and believed that their partners shared the same view. Based on the aforementioned findings and additional findings comparing the body image concerns of heterosexual and gay men, Siever concluded that regardless of gender, healthier body images may be the result of choosing female sexual partners.

Further support for a protective effect was provided by Herzog et al. (1992) who found that lesbians reported less drive for thinness and concern with their current weight, chose a heavier ideal weight, and did not diet as often as heterosexual women. Interestingly, the lesbians in their study weighed more than the heterosexual women. Based on their findings, these authors suggested that lesbians may have a different standard of the “ideal” than heterosexual women (Herzog et al., 1992). Results from a

related investigation of body dissatisfaction among lesbian college students suggested that the lesbian beauty ideal may contain aspects of both mainstream and lesbian values (Beren et al., 1997). Meaning, not only do lesbians feel pressure to be thin, but also pressure to be fit and muscular at the same time.

Opposing the view that being a lesbian serves as a buffer to body image dissatisfaction is the view espoused by Dworkin (1989). She suggested that gender, specifically being female, “trumps” any buffering effects that may be inherent in one’s self-identification as a lesbian. According to Dworkin (1989), all women experience the desire to mold their bodies to fit man’s image of a woman. Furthermore, although lesbians may reject traditional female values and question males’ control over and image of the female body, the socialization process is so strong that resulting self-beliefs cannot be altered.

In addition, although lesbian subculture may hold more flexible norms about body image (Rothblum, 1994), these values may not be able to overcome pervasive messages women have heard since childhood (Heffernan, 1996). Unlike other minority groups, lesbians are initially socialized within the dominant culture (Rothblum, 1994). Empirical support for these notions has been found noted by researchers who have found no differences between heterosexual and gay women with respect to body esteem (Striegel-Moore, Tucker, & Hsu, 1990), body dissatisfaction (Beren et al., 1996), and rates of dieting (Heffernan, 1999).

Further support for Dworkin’s notion that gender may trump sexual orientation with respect to body image disturbance was found by Brand et al. (1992). These

researchers conducted an investigation of dieting and body image with a sample of women and men. Brand et al. (1992) found that women reported greater dissatisfaction and perceptions of being overweight than men, and that sexual orientation was less of an influence on these variables than was gender.

The most consistent outcome regarding the relationship between sexual orientation and body image in women is the conflicting results. Bergeron and Senn (1998), based on their review of past literature, suggested that the differences may be a result of sample recruitment methods. For example, these authors noted it was common for researchers to recruit lesbian samples from bars or festivals and heterosexual samples from universities.

To overcome previous methodological considerations and to further investigate the internalization of sociocultural norms among women based on their sexuality, Bergeron and Senn (1998) used snowball sampling to obtain a diverse sample of 243 women, none of whom were recruited from lesbian organizations or bars. The authors found that heterosexual and gay women reported similar levels of awareness of sociocultural norms; however, the sample of lesbians reported lower internalization of these norms. Among all women, regression analyses revealed that internalization, and not awareness, contributed significantly to the prediction of body image attitudes; meaning, higher internalization was associated with more negative attitudes towards one's body. Overall, Bergeron and Senn (1998) suggested that the results of this investigation support Brown's (1987) contention that being a lesbian may not entirely prevent internalization of sociocultural norms, but it may serve as a buffer.

What are lesbian beauty norms?

In an effort to gain more insight into the potential buffering effects of being a lesbian, researchers have investigated the attractiveness norms that lesbians may value and internalize the most (Beren et al., 1997; Heffernan, 1999; Striegel-Moore et al., 1990). For example, Striegel-Moore et al. (1990) found a stronger link between body-esteem and self-esteem in lesbians than in heterosexual women. In addition, physical condition (which included strength, agility, and stamina) was related to self-esteem for the lesbians, but not for the heterosexual women, thereby supporting the notion that lesbians may emphasize strength norms more so than heterosexual women. This lesbian emphasis on strength was recently supported by Bergeron and Senn (1998), whose sample of lesbians reported more positive attitudes about strength and fitness than heterosexual women.

In a recent comparison of internalization of societal standards of weight and appearance between lesbians and heterosexual women, Heffernan (1999) found that her sample of lesbians was significantly more critical of traditional attitudes regarding the roles and rights of women in general than the heterosexuals. However, this critical stance disappeared when attitudes towards weight and appearance were considered. Irrespective of sexuality, the higher the degree of internalization of beauty norms, the higher the degree of weight and shape concerns (Heffernan, 1999).

Heffernan (1999) also investigated lesbians' evaluation of their partners' physical attractiveness, based on three components: (1) sexual attractiveness, which includes the face and sexual area; (2) weight, which reflects body parts that may be altered through

diet and/or exercise; and (3) physical condition, which reflects the size of the hips, thighs, stomach, and waist. Of the three components, the lesbians reported that physical condition was most salient in evaluation of one's partner. Furthermore, their conception of physical attractiveness had more of a functional quality, and the women were less concerned with "looks." The least important factor of the aforementioned three was weight, suggesting that partners may exert less pressure to subscribe to a thin beauty mandate (Heffernan, 1999).

To explore body image concerns in a sample of college-aged lesbians, Beren et al. (1997) conducted a qualitative investigation of body image ideals and concerns about appearance. The authors conceptualized the inconsistencies found in previous research between lesbians decreased emphasis on appearance and heightened body dissatisfaction as a challenge of biculturality, having to straddle both mainstream and lesbian cultures. This biculturality, the authors asserted, was reflected in the women's internalization of sociocultural norms, as reported in their study (Beren et al., 1997).

Overall, the women reported that the lesbian beauty ideal is thin but fit, and not too fem (feminine) (Beren et al., 1997). With respect to potential partners, the women placed an emphasis on thinness and/or fitness and strength, reflecting the stereotypical norms conveyed from both the heterosexual and lesbian cultures. Common concerns reported by the women included conflicting messages about (a) the importance of appearance and (b) the influence of negative stereotypes about lesbians on attitudes towards appearance (i.e., not wanting to appear stereotypically lesbian and thus trying to be more feminine vs. having feminist ideology).

Myers, Taub, Morris, and Rothblum (1999) conducted interviews and reviewed the literature on body image norms among lesbians. In their opinion, the literature does not support the notion that being a lesbian protects a woman from body image disturbance because the culture de-emphasizes the importance of physical attractiveness. The authors asserted that lesbians subscribe to different ideas of beauty than heterosexual women, and that the lesbian community has beauty norms which differ by subculture (e.g., butch and femme). In addition Myers et al. (1999) suggested that the norms one adheres to are likely to change with one's age and number of years out, although this hypothesis was not empirically tested. In general, the authors suggested, lesbians move from wanting to be identified as a lesbian to creating one's own, less rigid, sense of style (Myers et al., 1999).

Psychosocial variables that may buffer lesbians from internalization/dissatisfaction

Lesbian sexual identity development, as discussed earlier in this review, is a process whereby women move from identification as heterosexual to identification as a lesbian. Inherent in the identity development process is the internalization of lesbian cultural norms, as discussed in the previous section, which, depending on the particular norms internalized, may or may not buffer a lesbian from body dissatisfaction (Myers et al., 1999). Although the development of a lesbian identity may follow a general path of recognizable stages, movement through the stages is not fixed in time and is experienced differently with respect to intensity and duration (Parks, 1999).

Recently, lesbian researchers have investigated the relationships among identity development variables (e.g., internalized homophobia and affiliation with the lesbian

community) and body image, in an effort to determine what about identifying as a lesbian or being a member of the lesbian community may be affecting body satisfaction (e.g., Heffernan 1996, 1999; Pitman, 1999). For example, Pitman (1999), in her review of the literature on the effect of internalized homophobia in gay men, suggested that it may be manifested in numerous ways, including low self-esteem and depression (Shidlo, 1994). Although there is no direct empirical evidence exploring the effect of internalized homophobia in lesbians, Pitman (1999) and others have theorized that internalized homophobia manifests itself in depression (Rothblum, 1990), weight preoccupation (Brown, 1987), and body dissatisfaction (Pitman, 1999). Hence, further investigation into the relationship between lesbians' internalized homophobia and body image concerns is warranted (Heffernan, 1994).

Empirical studies have been conducted on another variable in the identity development process, involvement in the gay/lesbian community (Heffernan 1996, 1999; Ludwig & Brownell, 1999). In general, the major models (e.g., Cass, 1979) of identity development suggest that increased identification with the gay and lesbian community usually occurs towards the end of the development process, when individuals immerse themselves in that community and distance themselves from the heterosexual community in an effort to enhance feelings of social connectedness (Cass, 1979).

Although it has been hypothesized that increased involvement in the gay/lesbian community may serve as a buffer to body dissatisfaction (Brown, 1987), empirical evidence is mixed (Heffernan, 1996, 1999; Ludwig & Brownell, 1999). For instance, Heffernan (1996, 1999) demonstrated empirical support for a positive relationship

between increased involvement in gay/lesbian activities and lower weight concern among samples of lesbians (Heffernan, 1996, 1999), suggesting “buffering” effects of active involvement in/exposure to gays and lesbians. Conversely, Beren et al. (1996) found that affiliation with the lesbian culture was unrelated to body dissatisfaction in their sample of lesbians.

Based on the notion that lesbian culture is comprised of a heterogeneous group of women (Rothblum, 1994), Ludwig and Brownell (1999) investigated body satisfaction in relation to affiliation to different subcultures within the lesbian community. The researchers hypothesized that differences in body image would be found based on affiliation with one of three lesbian subcultures proposed by the authors. These subcultures included: (1) a traditional lesbian-feminist subculture, (2) a lesbian-sports subculture, and (3) a young, alternative music-based punk subculture. No relationship between body satisfaction and lesbian subculture was found.

Also investigated by Ludwig and Brownell (1999) were the relationships among social group affiliation and body satisfaction. The researchers found that women who reported having mostly heterosexual women as friends had significantly higher body image dissatisfaction than women who reported having mostly gay lesbian, bisexual, or heterosexual male friends. The researchers suggested that the agreement scale used to group individuals by majority of friendships might be a more effective measure of the salience of lesbian culture in someone's life, as opposed to assessment of involvement in lesbian activities. These researchers stressed the need for continuing research investigating the power of subcultures and social groups in an effort to protect individuals

from negative pressures that may contribute to eating disorders (Ludwig & Brownell, 1999).

Predictors of body dissatisfaction

In an effort to explore the influence of sexual orientation on body dissatisfaction, and subsequently eating disorders, Beren et al. (1996) have investigated well-known predictors that consistently account for variance in body dissatisfaction. These researchers compared lesbians and heterosexual women on psychosocial measures typically associated with body dissatisfaction (e.g., self-esteem, public self-consciousness, and social anxiety). Although similar profiles were found on all measures between the two groups, multiple regression procedures (which offer statistical measures of the extent to which a variable significantly contributes to the prediction of another) yielded different predictors of body dissatisfaction (as measured by scores on the Body Shape Questionnaire (Cooper, Taylor, Cooper, & Fairburn, 1987)). Controlling for age, body mass index (BMI), and education in both groups, Beren et al. (1996) found significant models that accounted for 43% of the variance of body dissatisfaction among lesbians, and 66% of the body dissatisfaction among heterosexual women. In addition to age, bmi, and education (accounting for 20% of the variance, combined), the regression equation for the lesbians included pressure to diet (accounting for 14%) and self-esteem (accounting for 9%). The equation for the heterosexual women included age, bmi, and education (19% of the variance, combined), self-esteem (33%), public self-consciousness (10%) and pressure to diet (4%). Meaning, differences in the variables that account for body dissatisfaction among women were found, based on sexual orientation. Although

Beren et al. (1996) did not offer a possible explanation for the differential findings of the regression equations, these results support the notion that additional variables not typically associated with body dissatisfaction among heterosexual women may contribute to body dissatisfaction among lesbians.

In review, researchers have not been able to demonstrate consistent evidence that lesbian status significantly protects women from body image disparagement, and ultimately disordered eating, as theorized by Mara (1983) and Brown (1987). Given that some researchers have found lesbian samples to report less body dissatisfaction than heterosexual women (Herzog et al., 1992; Siever, 1994) whereas other have found no differences in body esteem (Striegel-Moore et al., 1990) and body dissatisfaction (Beren et al., 1996), further investigation into the factors that contribute to body dissatisfaction, the main culprit in the development of EDs, among lesbians seems warranted.

One factor consistently implicated as a contributor to body dissatisfaction among women, and specifically lesbians, is internalization of sociocultural norms of attractiveness and beauty (Bergeron & Senn, 1998; Striegel-Moore et al., 1986). To investigate the potential buffering effects of lesbian status on internalization of norms, researchers have explored values and attractiveness norms specifically relevant to the lesbian community. Compared with heterosexual women, lesbians have reported a greater emphasis on strength (Bergeron & Senn, 1998) and physical condition (Striegel-Moore et al., 1990). The hypothesis that lesbians may subscribe to a different set of norms, however, is not fully supported, as researchers have found that lesbians often report

conflict between adherence to both traditional as well as lesbian standards of beauty and attractiveness (Beren et al., 1997).

Also theorized to contribute to body dissatisfaction among lesbians are sexual identity development variables, such as years "out" (Myers et al., 1999), internalized homophobia (Pitman, 1999), and involvement in community (Heffernan, 1996, 1999). Furthermore, in addition to age, bmi, and education, self-esteem and pressure to diet have been demonstrated to significantly contribute to body dissatisfaction among lesbians (Beren, 1996).

The Proposed Model of Disordered Eating Among Lesbians

In conclusion, this review of literature included an overview of lesbian sexual identity development, the development of eating disorders in all women, and the development of eating disorders in lesbians. As detailed in the previous sections, some researchers have noted significant differences in body image dissatisfaction and the prevalence of eating disorders between heterosexual and lesbian women (e.g., Schneider et al., 1995; Siever, 1994), whereas others have not (e.g., Beren et al., 1996; Heffernan, 1996). To account for these differences, researchers have examined specific relationships among variables hypothesized to contribute to the development of eating disorders in all women, including internalization of norms (Striegel-Moore et al., 1986), psychological factors, such as depression (Wiederman & Pryor, 2000), and body dissatisfaction (Stice, 1994). To date, however, no one comprehensive model has been tested in a sample of lesbians. As suggested by Beren et al. (1997), Bergeron and Senn (1998), and Heffernan

(1994), further investigation into the areas of disordered eating attitudes and behaviors is warranted.

The purpose of this study is to test a hypothesized model of the development of disordered eating among lesbians. Based on this review of literature, we proposed the structural model depicted in Figure 1. The model begins with a pathway between Lesbian Sexual Identity and Psychological Health. This link begins with Falco's (1996) contention that the lesbian identity process is an inherently stressful time and can influence psychological health and functioning. It is hypothesized that Lesbian Sexual Identity (i.e., comfort with one's sexuality, level of disclosure, affiliation with the gay community) will have a direct and positive effect on Psychological Health.

A second pathway hypothesized to have a direct but inverse effect on Psychological Health is Internalization of U.S. Societal Norms concerning attractiveness and beauty. This link is supported by Striegel-Moore et al. (1986) and Stice (1994), who argued that internalization of unrealistic body ideals leads to negative affect. Women who compare themselves to unattainable societal beauty standards may experience disturbances in psychological functioning and health if they are unable to achieve the standards.

It is hypothesized that a negative relationship will exist between Lesbian Sexual Identity and Internalization of Norms. Striegel-Moore et al. (1986) theorized that women living in a lesbian subculture would decrease internalization of sociocultural norms of beauty and attractiveness. Furthermore, Brown (1987) theorized that lesbians are less likely to be affected by cultural prescriptions of the beauty ideal than heterosexual

women. This link is empirically supported by Bergeron and Senn (1998), who found that lesbians reported lower internalization of sociocultural norms of beauty and attractiveness than heterosexual women.

A third pathway hypothesized to have a direct effect on Psychological Health will be Social Support. This link is supported by researchers who suggested that greater social support contributed to greater psychological health (Zea et al., 1999).

Next, Psychological Health is hypothesized to directly and inversely affect Body Image Concerns. Researchers investigating eating disorder etiology have demonstrated that depression is directly linked to body dissatisfaction, which subsequently influences eating disorders (Wiederman & Pryor, 2000). In addition, Beren et al. (1996) found that for lesbian women, low self-esteem was a significant predictor of body dissatisfaction.

Lastly, Body Image Concerns is hypothesized to directly affect Disordered Eating. Body image dissatisfaction is consistently recognized in eating disorder symptomology as a primary diagnostic feature. This link is supported by researchers suggesting that body dissatisfaction and increased emphasis on weight and shape are directly linked with eating disturbances (Levine & Smolak, 1992; Striegel-Moore et. al, 1986).

CHAPTER II

METHOD

Participants

A total sample of 643 women participated in this study. The women were recruited from a variety of sources, including undergraduate courses at two large Southern universities, various gay/lesbian groups within Texas, and from listserv respondents from across the United States of America, including Alabama, Arizona, California, Florida, Indiana, Maine, Maryland, Massachusetts, Minnesota, Missouri, Nevada, New Jersey, North Carolina, Ohio, Oklahoma, Nevada, New Mexico, New York, Pennsylvania, Tennessee, Texas, Washington, Virginia, West Virginia, Utah, Washington, D.C., and Wisconsin. From the total sample, 30 participants were excluded due to incomplete responses and age restrictions (i.e., at least 18 years of age), leaving 613 participants for the initial demographic analyses. After excluding the women who rated their sexual orientation as bi-sexual ($n = 38$) and the one woman who reported no sexual orientation, structural equation modeling (SEM) procedures were conducted on a total of 574 women (294 heterosexuals, 280 lesbians).

Age range of the total sample was 18 to 77 ($M = 29.78$, $SD = 12.74$). Age range for the heterosexual group was 18 to 49 ($M = 20.21$, $SD = 3.46$), whereas the range for the lesbian group was 18 to 77 ($M = 39.40$, $SD = 11.52$). The racial/ethnic composition of the total sample was: 71.9% Caucasian, 13.7% African-American/Black, 8.2% Hispanic/Latino, 3.8% Asian, 0.7% Native American/Indian, and 1.8% other. The

racial/ethnic composition of the heterosexual sample was: 60.2% Caucasian, 21.1% African-American/Black, 10.9% Hispanic/Latino, 5.8% Asian, 0.0% Native American/Indian, and 2.0% other. The racial/ethnic composition of the lesbian sample was: 87.9% Caucasian, 4.3% African-American/Black, 5.7% Hispanic/Latino, 0.7% Asian, 1.1% Native American/Indian, and 0.4% other.

In addition to age and racial/ethnic disparities between the two groups, income levels varied as well. For the heterosexuals, 87.2% reported a yearly income of less than \$15,000, while only 14.5% of the lesbian reported similar earnings. The majority of the lesbians (51.8%) reported yearly earnings between \$25,000 and \$54,999.

Mean BMI for the total sample of women was 26.65 kg/m^2 ($SD = 7.02$) with scores ranging from 16.17 kg/m^2 to 74.00 kg/m^2 . Mean BMI for the heterosexual women was 23.92 kg/m^2 ($SD = 5.35$) with scores ranging from 16.17 kg/m^2 to 74.00 kg/m^2 . Mean BMI for the lesbians was 29.13 kg/m^2 ($SD = 7.52$) with scores ranging from 18.61 kg/m^2 to 58.53 kg/m^2 .

Instruments

Lesbian Sexual Identity Variables. Based on recommendations for a multidimensional assessment of sexuality (Golden, 1987; Morris & Rothblum, 1999), participants' sexual orientation was measured by the following: (1) sexual orientation (identity), (2) comfort with one's sexuality (internalized homophobia), (3) extent of disclosure, (4) time out, and (5) affiliation with the GLB community.

Based on the method developed by Kinsey et al. (1948; 1953), respondents were asked to identify their sexual orientation. Using a 7-point scale, participants in the current

study indicated the degree to which they consider themselves lesbian. The scale ranged from 1, exclusively lesbian, to 7, exclusively heterosexual. The label of bisexual described the rating of 4. For the analyses conducted in this study, those who responded with a 1 or 2 were categorized as lesbians and those who responded with a 6 or 7 were categorized as heterosexuals. Those who responded with a 3, 4, or 5 were considered bisexual and were excluded from structural equation modeling analyses. In addition, the degree to which one reported feeling comfortable with her reported sexual identity (an indication of internalized homophobia) was assessed on a 7-point Likert scale with anchors of 1, not comfortable at all, to 7, very comfortable.

Extent of disclosure of one's lesbian identity was measured using procedures utilized by Bradford and Ryan (1987). Disclosure was measured by the reported percentage of people who participants reported knew of their sexual orientation in each of 4 categories: (1) GLB friends, (2) straight friends, (3) family members, and (4) co-workers/classmates. Affiliation with the GLB community was assessed by participants' reported sense of connectedness to and affiliation with the local GLB community. Responses were assessed on a 7-point Likert scale with anchors of "highly affiliated/connected" to "not at all affiliated/connected" with the local GLB community.

Stage of sexual identity development was assessed with the 21-item Sexual Identity Development Scale (SIDS). Designed specifically for use in this study, this measure was developed to parallel Cass' hypothesized stage model of sexual identity development. A group of 9 researchers (1 psychologist and 8 advanced doctoral students) summarized each stage of the model and discussed the themes of each stage. For each of

the 6 stages of the model, including a prestage, 4 statements reflecting relevant cognitive, emotional, and behavioral components were created. These 4 statements were further discussed, modified, and rejected, resulting in 3 consistent and coherent statements per stage, for a total of 21 items. Items within each stage reflected self-identity, feelings of comfort with sexual identity, and relevant behaviors. Respondents were asked to rate their agreement with each statement on a 7-point Likert scale with anchors of strongly disagree to strongly agree. Total SIDS scores were obtained by reverse scoring items #1, 2, and 3 and then summing all items, with higher scores reflecting a more developed lesbian sexual identity.

Before conducting an exploratory factor analysis (EFA) and a subsequent confirmatory factor analysis (CFA) of the SIDS, the data were split into 2 matched groups with approximately even numbers of heterosexuals and lesbians. The resulting data sets were examined for missing data points and those with more than one omitted item within each hypothesized stage were deleted from further analyses. The first matched group ($n = 270$) was used for the EFA, the second matched group ($n = 312$) was used for the CFA.

EFA was conducted on the 21 items using SPSS 10.05 (Brace, Kemp, & Sneglar, 2000). Principle axis factor analysis, with SMC s as the initial communality estimates, was conducted to determine the underlying factor structure. Examination of the scree plot of eigenvalues, percent variance explained, item-total score correlations, individual item alpha consistency, and factor loadings suggested that either a 1- or a 2-factor solution was possible. The 2-factor model was rotated using the Promax procedure. Examination of the

two models revealed that the one factor solution was more interpretable, made more conceptual sense, and best fit the data.

In deciding which items to keep, only those with a “good” factor loading of greater than or equal to .55 were retained (Comrey & Lee, 1992). This conservative decision necessitated dropping 5 of the 21 items (item # 4, 6, 8, 9, 12). Each of the remaining items demonstrated inter-item correlations greater than .39 and item-total score correlations greater than .57. Standardized alpha coefficient for the 16-item SIDS was .88 for the total sample, .88 for the heterosexual sample, and .72 for the lesbian sample. See Table 1 for the 21-item SIDS.

Three of the items, #s 1, 2, and 3, were reversed scored and all items were summed to achieve total SIDS scores, potentially ranging from 16 (low lesbian sexual identity development) to 112 (high lesbian sexual identity development). The mean total SIDS score for the complete sample was 59.68 (SD = 34.29). SIDS scores for lesbians (M = 92.30, SD = 10.59) were significantly higher than SIDS scores for the heterosexuals (M = 25.99, SD = 11.15; $t(572) = 72.97$, $p < .001$) in the current study.

Confirmatory factor analysis was conducted to assess the adequacy of the new 16-item SIDS using the EQS Structural Equation Program (Bentler, 1995). The fit of the data was assessed by examining the chi-square value, chi-square to degrees of freedom ratio, root mean square residual (RMSR), root mean square error of approximation (RMSEA), and a number of fit indices (NFI, normed fit index; NNFI, non-normed fit index; CFI, comparative fit index; and GFI, goodness of fit index). Fit indices and completely standardized factor loadings suggested that the data fit the model well. All

items loaded greater than or equal to .60, and T-values for all items were significant (> 1.96). RSMR was .04 and RMSEA was .11. Goodness of fit indices were all above the accepted standard of .90.

Convergent and discriminant validity for the SIDS was examined by computing Pearson product-moment correlations between the SIDS and the other lesbian sexual identity measures (i.e., comfort with sexuality, sexual orientation, disclosure scores, time “out,” connectedness to the GLB community). For the complete sample, the relationships found between SIDS scores and all the other sexual identity development measures were significant, in the hypothesized directions, and consistent with the findings of previous researchers. For the lesbian sample, only the relationship between SIDS score and comfort with sexual identity was significant ($r = .23, p < .001$), whereas for the heterosexual sample, significant relationships were found between SIDS scores and comfort with sexuality ($r = -.17, p < .01$), and connectedness to the GLB community ($r = .42, p < .001$). These correlational differences in responding suggest that the SIDS was able to discriminate between heterosexual and lesbian samples in a predictable manner.

Additional validation of the SIDS was provided by examining the relationships among SIDS scores and measures of psychological health. For the lesbian sample, SIDS scores were not significantly related to any of the psychological health variables, suggesting poor construct validity in this sample. It was expected that a stronger and more positive sexual identity would be associated with higher self-esteem and less confusion and anxiety. For the heterosexual sample, low significant relationships between SIDS scores and measures of depression ($r = .19, p < .001$) and self-esteem ($r = -.13, p <$

.05) were found. Meaning, for heterosexual women, lower lesbian sexual identity development scores were associated with less depressive symptomology and higher self-esteem. Although the lesbians scored significantly higher on the SIDS than heterosexual women, the aforementioned reliability and validity findings suggest that the SIDS may not have been an accurate representation of either non-lesbian (i.e., heterosexual) identity development or lesbian sexual identity development.

Social Support. The 27-item Social Support Questionnaire (Sarason, Levine, Basham, & Sarason, 1983) was designed to measure the total number of persons individuals feel they can count on for help, as well as individuals' perceptions of how beneficial and satisfying these relationships are to them. In this study, the 6-item short form of the Social Support Questionnaire (SSQ-6) (Sarason, Sarason, Shearin, & Pierce, 1987) was used. Respondents are first asked to list the number of people (up to eight) they can count on for physical or psychosocial support under different conditions. A sample item is "Who can you count on to console you when you are very upset?" Following the first part of each of the 6 items is a 7-point Likert scale with anchors of "very dissatisfied" to "very satisfied" for which respondents are asked to rate their level of satisfaction with these relationships. The SSQ-6 yields two factors, a social support availability or number score (SSQ-N) and a social support satisfaction scores (SSQ-S). Total scores on each are achieved by summing the scores of each item and dividing by the total number of items, six.

Sarason et al. (1983) conducted a series of studies using several hundred male and female undergraduate psychology students to demonstrate initial reliability and validity

of the SSQ. Alpha coefficients of internal reliability for the SSQ-N and the SSQ-S were .97 and .94, respectively. Sarason et al. (1987) reported internal consistencies for the SSQ6-N and SSQ6-S were .90 and .93, respectively. In the current study, Cronbach's alphas for the total sample were .93 for the SSQ6-N and .97 for the SSQ6-S. CAs for the lesbian sample were .93 for the SSQ6-N and .97 for the SSQ6-S. CAs for the heterosexual sample were also .93 for the SSQ6-N and .97 for the SSQ6-S. A stable measure, test-retest reliability at four weeks was .90 and .83 (Sarason et al., 1983), at eight weeks was .78 and .86 (Sarason, Sarason, & Shearin, 1986), and at 36 months was .67 and .55 (Sarason et al., 1986). A modest correlation of .34 was found between the two factors, suggesting that social support be broken down into the components of availability (number) and satisfaction (Sarason et al., 1983).

Validity of the SSQ was demonstrated by significant correlations among the each of the factors with measures of personal and emotional discomfort, separately by gender (Sarason et al., 1983). For the females, significant correlations were found between SSQ-N and extraversion ($r = .35$), anxiety ($r = -.30$), depression ($r = -.31$), and hostility ($r = -.26$), as well as between the SSQ-S and anxiety ($r = -.39$), depression ($r = -.43$), hostility ($r = -.36$), and neuroticism ($r = -.37$). For the males, significant correlations were found between SSQ-N and depression ($r = -.24$), and hostility ($r = -.23$), as well as between the SSQ-S and depression ($r = -.22$). The SSQ factors did not significantly correlate with a measure of social desirability for either sex. Sarason et al. (1983) also demonstrated that individuals with the highest levels of self-esteem reported significantly more social support and satisfaction regarding those relationships. Sarason et al. (1987) concluded

that the SSQ6 was as valid as the original SSQ after finding no significant differences between construct validity correlations for each of the measures.

Internalization of Sociocultural Norms. The 19-item Beliefs About Attractiveness Scale -Revised (BAA-R; Petrie, Rogers, Johnson, & Diehl, 1996) was designed to measure the extent to which individuals endorse contemporary values of attractiveness in North American society. Respondents rate their level of agreement with each item on a 7-point Likert scale with anchors of “strongly disagree” (1) to “strongly agree” (7). The scale contains two factors, the Importance of Being Physically Fit (9 items) and the Importance of Being Attractive and Thin (10 items). Sample items from each of the factors, respectively, include “A physically fit and in-shape body reflects the beauty ideal for women.” and “The heavier a woman is the less attractive she is.” Full-scale scores are obtained by summing all the items and dividing by 19. Scores for each factor are obtained by summing the items and dividing by the number of respective items on the scale. Hence, scores range from 1, low internalization of societal values, to 7, high internalization of societal values.

Petrie et al. (1996), using two ethnically/racially diverse samples of college students, reported satisfactory internal consistency for the full-scale ($CA = .90$), the Importance of Being Physically Fit factor ($CA = .88$), and the Importance of Being Attractive and Thin Factor ($CA = .89$). In the current study, Cronbach’s alphas for the total sample were .91 for the full-scale, .87 for the Importance of Being Physically Fit factor, and .88 for the Importance of Being Attractive and Thin Factor. CA’s for the lesbian sample were .91 for the full-scale, .86 for the Importance of Being Physically Fit

factor, and .86 for the Importance of Being Attractive and Thin Factor. CA's for the heterosexual sample were .91 for the full-scale, .87 for the Importance of Being Physically Fit factor, and .88 for the Importance of Being Attractive and Thin Factor.

Construct validity was found by Petrie et al. (1996) for both factors. The Importance of Being Physically Fit factor was significantly correlated with the Body Shape Questionnaire (BSQ; $r = .44$), which measures preoccupation with body shape, the Appearance Orientation subscale of the Multidimensional Body-Self Relations Questionnaire (MBSRQ – AO; $r = .24$), which measures the importance of appearance and grooming, bulimic symptomology ($r = .40$), depression ($r = .16$), and self-esteem ($r = -.29$). Concerning the Importance of Being Attractive and Thin factor, significant correlations were found with the BSQ ($r = .42$), the MBSRQ Appearance Evaluation factor ($r = -.26$), which measures overall satisfaction with one's appearance, bulimic symptomology ($r = .46$), depression ($r = .28$), and self-esteem ($r = -.32$).

Depression. The 20-item Centre for Epidemiologic Studies Depression Scale (CES-D; Radloff, 1977) measures depressive symptoms within the general population. In addition, the CES-D has been validated in clinically depressed individuals (e.g., Boyd, Weissman, Thompson, & Myers, 1982). Each item represents a symptom of depression previously validated on longer depression scales. Respondents are asked to rate the frequency of behaviors or symptoms of depression during the past month on a four-point scale with anchors of 0, "rarely or none of the time (less than 1 day)," to 3, "most or all of the time (5-7 days)." Scores potentially range from 0 (no depression) to 60 (high

depression). A score of 16 or greater is typically used as the cut-off score for clinical depression (Boyd et al., 1982).

The CES-D has demonstrated good reliability and validity among numerous samples (Orme, Reis, & Herz, 1986). Researchers have reported high alpha reliabilities (.88; Knight, Williams, McGee, & Olaman, 1997; Orme et al., 1986) and adequate test-retest reliability (Radloff, 1977). High reliabilities (CA = .93 (total sample), .95 (lesbians), .90 (heterosexuals)) were found in the current study. Construct validity was demonstrated by correlations with clinical ratings of depression and by relationships with other measures of depression (e.g., Bradburn Negative Affect scale, $r = .60$; Radloff, 1977). Discriminant validity was demonstrated by moderate correlations with self-esteem and state anxiety and a high correlation with trait anxiety (Orme et al., 1986).

Self-esteem. The 10-item Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) is a measure of global self-esteem, the evaluative component of self-concept. Each item is answered on a 4-point Likert scale with anchors of “strongly agree” and “strongly disagree.” Guttman scoring is used to obtain total RSES scores. One point is tallied for high self-esteem responses on: (a) two or three of the first three items, (b) items 4 and 5, and (c) items 9 and 10. Items 6, 7, and 8 are scored individually, allowing for a total range of scores from 0 (low self-esteem) to 6 (high self-esteem).

Researchers have reported acceptable and high alpha reliability coefficients, ranging from .72 (Ward, 1977) to .88 (Fleming & Courtney, 1984). Alpha reliability in the current study was high (CA = .92 for total sample, .92 for lesbians, .92 for heterosexuals). Test-retest reliability has been reported as .82 after one week (Fleming &

Courtney, 1984) and .50 after one year (McCarthy & Hoge, 1984). In terms of validity, the RSES correlated moderately (.59) with the Coopersmith Self-Esteem Inventory (Robinson & Shaver, 1973). Low to moderate negative correlations have been found between the RSES and the Social Physique Anxiety Scale (Martin, Engels, & Wirth, 1993; Martin, Engels, Wirth, & Smith, 1997). Low to moderate positive correlations have been found between the RSES and the Interaction Anxiousness Scale (Leary, 1983; Leary & Kowalski, 1993).

Psychological health was also assessed using the 7-item visual-analogue mood scale (VAMS) developed by Stice and Shaw (1994). The items assess depression, happiness, shame, guilt, confidence, anxiety, and stress. Respondents are asked to rate their current affective state on a 5-point Likert scale with anchors of “not at all” (0) and “extremely” (4). In the current study, the word “confidence” was replaced by the word “confused” to reflect a more specific negative affective state.

Stice and Shaw did not provide reliability information for their scale because each item was used individually and total scores were not determined. Convergent validity was demonstrated by correlations between items and the Beck Depression Inventory (BDI). The BDI was significantly correlated with scores on the Depression ($r = .35$), Shame ($r = .37$), Guilt ($r = .29$), and Stress ($r = .32$) items. Discriminant validity was demonstrated by significant negative correlations between the BDI and the Happiness ($r = -.35$) and Confidence ($r = -.36$) items.

Body Image. The Body Parts Satisfaction Scale – Revised (BPSSR; Tripp & Petrie, 2000), is a 10-item measure of satisfaction with one’s body, with a focus on

specific parts typically association with dissatisfaction in women (e.g., stomach, buttocks, and upper thighs). It is based on the work of Petrie and Austin (1996) and Berscheid, Walster, and Bohrnstedt (1972). The BPSS-R has two factors, Satisfaction with Body (7 items) and Satisfaction with Face (3 items). Only the BPSS-R Satisfaction with Body factor was used for the analyses in the current study based on previous research suggesting that it is the factor most strongly related to measures of eating concerns (Petrie & Tripp, in press). Respondents rate their satisfaction with individual body parts on a 6-point Likert scale with anchors of “extremely dissatisfied” and “extremely satisfied.” Total body dissatisfaction score is obtained by summing individual item ratings within each factor and then dividing by the respective number of factor items.

Internal consistency for the BPSS-R factors, Satisfaction with Body ($CA = .90$) and Satisfaction with Face ($CA = .78$), was acceptable (Tripp & Petrie, 2000). In the current study, the Satisfaction with Body factor demonstrated acceptable reliability ($CA = .91$ for total sample, $.91$ for lesbians, $.91$ for heterosexuals). Construct validity for each of the factors was demonstrated by correlations with pre-existing measures of body dissatisfaction and disparagement. Satisfaction with Body and Satisfaction with Face were significantly related to the MBSRQ Appearance Evaluation (Cash, 1994a) factor ($r = .72, .41$, respectively), the Body Shape Questionnaire (Cooper, Taylor, Cooper, & Fairburn, 1987) ($r = -.72, -.28$), and the Situational Inventory of Body Image Dysphoria (Cash, 1994b) ($r = -.71, -.39$).

The Body Shape Questionnaire – Revised –10 (BSQ – R -10; Mazzeo, 1999) assesses participants’ preoccupation with body size and shape. This shorter, revised

measure was originally based on 34-item scale developed by Cooper et al. (1987). Existing items were modified, 13 new items were added, and then factor-analyzed to yield a unidimensional 10-item measure. Eight of the original items were retained, two were new. An example item is, “Have you been particularly self-conscious about your shape when in the company of other people?” For each item, participants rate the intensity of their concerns about their bodies using a 6-point Likert-type scale with anchors of 1 (“never”) to 6 (“always”). Total scores are obtained by summing all responses, with a potential range from 10 (little to no concern) to 60 (high concern).

Mazzeo reported high internal consistency (CAs = .96). Alpha reliability was high in the current study as well (CA = .97 for the total sample, .96 for the lesbians, .97 for the heterosexuals). All items loaded highly on one-factor, supporting the construct validity of the BSQ-R-10. Criterion validity was demonstrated based on the BSQ-R-10’s stronger correlation with measures of disordered eating than other body image attitude measures (Mazzeo, 1999). In addition, the BSQ was significantly correlated with eating disorder and body dissatisfaction measures including the BULIT-R ($r = .77$), the MBSRQ-AE ($r = -.72$), and the Eating Attitudes Test-26 scores ($r = .74$) (Mazzeo, 1999).

The 69-item Multidimensional Body-Self Relations Questionnaire (MBSRQ; Cash, 1994a) is a measure of the multidimensional nature of body image and weight-related variables. Unlike other body image measures that only account for affective components of body image, the MBSRQ reflects affective, cognitive, and behavioral aspects of the physical self (Cash & Pruzinsky, 1990). Items are presented on 5-point Likert scales with anchors of 1, “definitely disagree,” to 5, “definitely agree.” An

example item reads, “I am always trying to improve my physical appearance.” Total scores are obtained by summing items across each subscale and then dividing by the number of items. Subscale scores can range from 1 (low appearance orientation/evaluation) to 5 (high orientation/evaluation).

Factor analytic studies revealed the MBSRQ contains seven factor subscales representing evaluation and cognitive-behavioral orientation of three domains: appearance, fitness, and health/illness (Brown, Cash, & Mikula, 1990; Cash, Winstead, & Janda, 1986). The Appearance Evaluation (AE) subscale was used in the current study. The AE subscale contains 7 items and reflects feelings of attractiveness/unattractiveness and satisfaction/dissatisfaction with one’s looks. The AE subscale has demonstrated high and consistent internal reliability estimates for both men (.88; Cash, 1994a) and women (.88; Cash, 1994a). Cronbach’s alphas in the current study were .89 for the total sample, .90 for the lesbians, and .90 for the heterosexuals. Test-retest reliability at one month was .89 (men) and .90 (women) (Cash, 1994a).

Researchers (Geissler, Kelly, & Saklofske, 1994) assessing college-age women have reported significant negative correlations between AE and the Bulimia Test — Revised (BULIT-R; Thelen, Farmer, Wonderlich, & Smith, 1991) and the Appearance Schemas Inventory (ASI; Cash & Lebarge, 1996), a measure of the importance, meaning, and effects of appearance in one’s life. AE subscale scores also differentiated overweight women from both normal and underweight women, suggesting that the overweight women were more critical of their appearance (Cash & Green, 1986).

Disordered Eating. The 19-item Binge Scale (BS; Hawkins & Clement, 1980) assesses attitudinal and behavioral components of binge eating. Of the 19 original items, 9 provide a measure of the severity of binge eating tendencies. Sample items include “How often do you binge eat?” and “Do you ever vomit after a binge?” The scale questions are presented in a multiple choice format. For each response there is a point value assigned to the answer options, either 0, 1, 2, or 3. Total scale scores are determined by summing responses to each question. Scores on the BS range from 0, low, to 24, high binge eating tendencies.

Hawkins and Clement reported internal consistency for the 9-item BS was adequate ($\alpha = .68$). Alpha reliabilities of the BS in the current study were high (.96 for the total sample, .92 for the lesbians, and .97 for the heterosexuals). Test-retest reliability at one month was .88. With respect to construct validity, the BS was significantly correlated with measures of dieting concern (restraint) (r 's = .60 and .61) and negative self-image (r 's = .47 and .55) in two samples of undergraduate females. Concurrent validity for the BS was found to be highly correlated with scores on the Bulimia Test ($r = .93$; Smith & Thelen, 1984) and the Bulimia Test-Revised ($r = .85$; BULIT-R; Thelen, Farmer, Wonderlich, & Smith, 1991).

The 36-item Bulimia Test – Revised (BULIT-R; Thelen, Farmer, Wonderlich, & Smith, 1991), based on DSM-IV criteria, assesses bulimic symptomology. Sample items include “I am satisfied with my eating patterns” and “Most people I know would be amazed if they knew how much food I can consume at one sitting.” Items are presented on a 5-point Likert scale, with scores of 1 point tallied for the most “normal” responses

and 5 points responses answered in the most extreme bulimic direction. Total scores are computed on 28 of items by summing item scores to yield a range of scores from 0 (no bulimic symptomology) to 140 (high bulimic symptomology).

The BULIT-R has demonstrated adequate internal consistency ($CA = .95, .97$; Thelen et al., 1991). Internal consistencies in the current study were similar ($CAs = .95$ for the total sample, $.93$ for the lesbians, and $.94$ for the heterosexuals). Test-retest reliability at two months was $.95$ (Thelen et al., 1991). The BULIT-R has demonstrated utility differentiating between bulimic and control participants (Thelen, Mintz, & Vander Wal, 1996). Construct validity has been demonstrated by high correlations with the BULIT ($r = .99$; Smith & Thelen, 1984) and the Binge Scale ($r = .85$; Hawkins & Clement, 1980).

Social Desirability. The Social Desirability Scale (SDS) was developed by Crowne and Marlowe (1960) and later shortened by Reynolds (1982). The SDS assesses the tendency to respond to self-report measures in a socially desirable manner. Form C, the 13-item alternative to the original 33-item scale, contains true/false statements describing culturally approved of, highly desirable behaviors that have a low incidence of occurring. For example, item #13 reads, "I have never deliberately said something that hurt someone's feelings." Items that are answered in the non-predicted direction are summed to achieve a total social desirability score ranging from 0 (low social desirability) to 13 (high social desirability).

Internal consistency reliability (KR-20) was $.76$ (Reynolds, 1982), which has been replicated by other researchers (Robinette, 1991, Zook & Sipps, 1985). Internal

consistencies (KR-20s) in the current study were .64 for the total sample, .66 for the lesbians, and .63 for the heterosexuals. Validity has been demonstrated with correlations between Form C and the original 33-item measure (.93; Reynolds, 1982), as well as correlations between Form C and the validity scales of the MMPI, L (.59), F (-.52), and K (.54) (Robinette, 1991).

Demographics. A demographics questionnaire was used to obtain information regarding the participants' age, race/ethnicity, organization recruited from, income level, current weight and height, and ideal weight. Body Mass Index (BMI) was computed using the formula (weight (kg)/height² (m²)) (Keys, Fidanza, Karvonen, Kimura, & Taylor, 1972). In addition to the lesbian sexual identity variables outlined above, participants were asked the number of years they have been "out," their current relationship status, and number of previous lesbian relationships.

A self-reported appearance rating was assessed in the demographic questionnaire, based on a modification of the gender role classification schema developed by Bem (1981). For the purpose of the current study, a self-reported appearance rating was assessed using one, 6-point Likert scale, as utilized by Ludwig and Brownell (1999). Respondents were asked to describe their appearance on a scale with anchors of "highly masculine" and "highly feminine." Participants who self-identified as either "highly masculine" or "masculine" were classified as "masculine." Participants who self-identified as either "slightly masculine" or "slightly feminine" were classified as "androgynous." Participants who self-identified as either "highly feminine" or "feminine" were classified as "feminine." Ludwig and Brownell found that BSQ scores, which

reflect body image preoccupation, significantly differed among the three classifications of women in their study ($F = 5.16, p < .01$), even after body mass index (BMI) was used as a covariate. Post-hoc analyses revealed no differences in body image preoccupation between the androgynous and masculine groups, but that feminine women differed significantly from both of these groups. Similar results were found among the three groups for a self-reported satisfaction with their “overall appearance” ($F = 3.24, p < .05$).

Adoption of a feminist identity was assessed using a one question self-report item contained in the demographic questionnaire. Participants rated the degree to which she described herself as a feminist on a 6-point Likert scale with anchors of never (1) to always (6). Using a similar classification scheme, Bergeron and Senn (1998) found that feminist identification, in addition to lesbian identification, more strongly predicted scores on the Strength and Fitness subscale of the Body Attitudes Questionnaire (Ben-Tovim & Walker, 1991) than internalization of norms.

Procedures

Participants for this study were recruited from two large Southern universities and a number of women's groups (i.e., churches, choirs, business networks), conferences, and listservs across the United States whose majority membership is lesbian. Use of the internet to aid in data collection allowed for a more geographically and socially diverse sample as well as an opportunity to recruit participants who do not consider themselves to be out. Interested participants emailed the lead researcher directly and were sent individual packets and a pre-stamped, addressed envelope to facilitate participants

packet return. A total of 961 packets were distributed; 643 were returned by the closing date, resulting in a 66.9% response rate.

Organizational approval was sought and granted from all participating organizations/groups. All participants were asked to contribute to a project on sexual identity development, mental and physical health, and eating concerns. Specifically, participants responded to questions concerning sexual identity development, social support, internalization of societal norms of beauty and attractiveness, depression, self-esteem, body image concerns, and eating patterns. On the average, participants completed the packets in 30 minutes.

As an incentive for participation, all respondents were afforded the opportunity to be entered into a raffle for one of two \$30.00 gift certificates to a national retail bookstore upon completion of the packet. In addition, undergraduate psychology students were offered extra credit for their participation. Participants were assured of confidentiality and anonymity and asked to fill out the questionnaires individually and as honestly as possible. Each packet of questionnaires was numbered, with a demographics survey first and the lesbian sexual identity development questions second. The remaining measures were counterbalanced to help control for ordering effects.

CHAPTER III

RESULTS

The purpose of this study was to test a comprehensive model of the development of disordered eating among lesbians. In the first part of the study, a lesbian disordered eating model was tested. In the second part, the model was tested with a heterosexual sample. The results are presented in the following sections: descriptive analyses, overview of structural equation modeling, the measurement model, the structural model, the testing of the model with the heterosexual sample, limitations, implications, and conclusion.

Descriptive Analyses

After the raw data was entered into SPSS 10.05 (Brace, Kemp, & Snelgar, 2000), the complete data set was randomly checked for data entry errors and mistakes were corrected. Incomplete sets of responses (e.g., failure to complete an entire measure) and ineligible participants (e.g., women under 18) were removed from the data set. Missing data points were replaced with mean values if only one (or two if the questionnaire was longer than 10 items) missing value existed within each questionnaire. Item means for each sample were used to replace missing values for all scales except the SIDS. Individual factor means were used for SIDS missing values. Otherwise, incomplete packets were not utilized for data analyses. From the 643 returned packets, the complete usable data set contained 613 cases.

Demographic and descriptive information were determined first. To provide an overview of the sample and their responses, means and standard deviations, ranges, and simple Pearson correlations were computed among the demographic variables. Each variable's distribution was examined for normality and outliers.

From the complete data set, which contained responses from women of all sexual orientations, sub-samples of heterosexual, bisexual, and homosexual (lesbian) women were created. Classification into the three sexuality groups was based on responses to the 7-point Likert scale asking respondents to rate their sexual orientation from (1) "exclusively lesbian" to (7) "exclusively heterosexual." Responses of 1 or 2 were categorized as "lesbians" ($n = 280$, 45.8% of the complete sample) and responses of 6 or 7 were categorized as "heterosexuals" ($n = 294$, 48.0%). All other respondents were considered "bisexuals" ($n = 38$, 6.2%).

Body mass index (BMI) and total scale scores were computed for the total sample, the heterosexual sample, and the lesbian sample. Descriptive statistics are not presented on the bisexual sample due to the small sample size. A table of the descriptive statistics for the measured variables is presented in Table 2. Correlation matrices were also computed to determine the relationships among the total scores for the measured variables for the total sample, heterosexual sample, and lesbian sample (see Tables 3, 4, and 5, respectively).

Overview of Structural Equation Modeling

Structural equation modeling (SEM), also referred to in some texts as causal modeling or covariance structural analysis, is an extension of multiple regression with

additional benefits. What makes SEM more powerful than regression is that it allows the researcher to examine relationships regression is not designed to do (e.g., the modeling of measurement error, correlated independent variables, and latent dependent variables with multiple indicators). Specific advantages include the ability to reduce measurement error by using multiple indicators for latent variables, test models in their entirety to determine fit, as opposed to examining individual coefficients, and compute analyses on non-normally distributed data. For a more comprehensive discussion of SEM, the reader is directed to Schumaker and Lomax (1996).

SEM analyses in the current study were conducted using EQS 6.0 (Bentler, 1995). According to Bentler, EQS utilizes the most accurately known statistics for analyzing data that may not be multivariate normally distributed, based on the assumption that real data are not normally distributed. Maximum likelihood procedures (ML) were used to estimate the free parameters in the model, based on the widely held belief of statistical researchers that ML is appropriate under less-than-optimal analytic conditions (e.g., small sample size or excessive kurtosis).

Before providing an overview of SEM, key terms need to be introduced. A model is composed of the relationships among latent variables, both independent and dependent, and can be represented pictorially. Latent variables are not measured directly, and are assumed to be represented by the researcher's chosen measured (or observed) variables. Examples of measured variables include a total scale-score on a psychological inventory or a one-item measure. Each measured variable also has an associated error term. In SEM, latent variables may be independent or dependent. They are considered

“exogenous” if they are independent and not linked to a prior causal variable. Else, latent variables are considered “endogenous” if they are mediating variables (i.e., those which are both effects of and predictors of other dependent variables) or pure dependent variables. Each latent variable also has an associated error term, reflecting the effects of unmeasured variables not contained in the model.

Models are specified by the relationships among the pathways (or parameters) of error terms, and measured and latent variables in the model. Parameters can be either null (suggesting no relationship and thus defined by the lack of a pictorially represented arrow), free (represented by an arrow and allowed to be estimated by the statistical program), or fixed variables by the researcher at a constant (usually 1.0). Modification of parameters to achieve better model fit include either freeing or fixing parameters. Freeing a parameter which was once fixed has the potential to improve the overall fit of the model, however the model will be less parsimonious (simple). Fixing a parameter that was once free may decrease the fit of the model, however the model will become more parsimonious. A parameter may be fixed when the pathway involved does not reveal that a significant amount of variance is accounted for by that pathway.

SEM is considered a two-part process (Bentler, 1995). Once a model is specified on the basis of theory, the first step involves validation of the measurement model, the second involves fitting of the structural model. To validate a measurement model, confirmatory factor analysis (CFA) is employed to determine the degree to which each hypothesized latent variable accounts for variance in the observed (or measured) variables. Through CFA, the researcher is able to determine which measured variables

best load on each latent variable. Standardized factor loadings range between 0 and 1. At least three measured variables are preferred for each latent variable after CFA, although analyses can be conducted with two with particular attention given to the potential of unreliable error estimates.

During the CFA process in specifying the measurement model, each of the latent variables is factor analyzed. Hence, the number of CFAs computed will be equal to the number of latent variables specified in the model. CFAs result in factor loadings of the measured variables. Standardized solutions, used to evaluate the strength of each loading, range from 0 (low) to 1 (high). Relationships among the latent constructs are not evaluated when confirming the measurement model, rather each of the latent constructs are allowed to covary with the others.

The measurement model is evaluated based on goodness of fit indices, which reflect the degree to which the observed covariance matrix and the one based on the specifications of the model are similar. Researchers have yet to come to consensus as to the number of fit indices to be examined, but many recommend reporting at least 3 or 4 tests (Kline, 1998), such as the chi-square value, root mean square residual (RMR), root mean square error of approximation (RMSEA), and a number of fit indices (NFI, normed fit index; NNFI, non-normed fit index; CFI, comparative fit index; and GFI, goodness of fit index). Goodness of fit indices, in general, range between 0 and 1 and are, thus, easy to interpret. Rules of thumb for acceptance of model fit is typically .90, although Bollen (1989) suggests that these cut-off points are arbitrary. Rules of thumb for standardized RMR and RMSEA values are that values less than .05 are idealized standards and values

between .05 and .08 represent fair, acceptable fits (MacCullum, Browne, & Sugawara, 1996).

The most commonly used fit index is the chi-square statistic, although researchers agree that this may not be the best fit index to evaluate because it is affected by small and large ($N > 200$) sample sizes and it is sensitive to departures from multivariate normality of observed variables. Different from goodness of fit indices, it is desirable to have a non-significant chi-square value because a significant chi-square means that the sample data covariance matrix is not similar to the estimated matrix. Hence, a non-significant chi-square may suggest that the sample data fits the model, although other models may fit the data as well. A modified chi-square statistic which is adjusted to correct for the bias introduced when data are non-normally distributed (i.e., kurtosis is high) by using robust standard errors, the Satorra-Bentler chi-square, was used to evaluate model fit in the current study.

Once each of the latent variables has been added to the measurement model and the fit evaluated with each subsequent addition, the next step involves testing and specifying the structural model. Unlike in the testing of the measurement model, in the structural model, the fit of the relationships among the independent and dependent latent variables is assessed. The fit of the structural model is evaluated similarly to the method for evaluating the measurement model, by examining fit indices and the parameter estimates (path coefficients).

Basically, testing the fit of the structural model answers the question of whether the model that the researcher created generates the sample covariance matrix. If the

answer is yes, and the model is cross-validated (deemed meaningful in an independent sample), then it maybe a useful model. If the model is not a good fit with the data, the model is considered to be mis-specified. Bentler (1995) suggests the following specific procedures for making model modifications, one at a time, when using the EQS 6.0 statistical program:

- (1) Always let theory be a guide before making any modifications.
- (2) Conduct a search for where to begin making changes, first on the measurement model and then on the structural model.
- (3) Examine the ratio of the parameter estimates and standard errors, the ratio of which is referred to as the “t-value” or “z-value.” These values should be significant (i.e., > 1.96), which means they are significantly different from 0. If they are not significant, modifications should be made, which may include fixing the parameter by setting it to 1.0 or some other specified value (e.g., an estimated error variance). Again, the guiding rule is that modifications need to be justified and make sense theoretically.
- (4) Examine the modification indices suggested by the Wald Test, which indicates if additional parameters should be fixed.
- (5) Examine the modification indices suggested by the Lagrange Test, which indicates if additional parameters should be freed.
- (6) Examine the matrix of standardized residuals (errors) between observed covariance matrix and the model implied covariance matrix. Large standardized residuals (i.e., > 1.96) should be examined and possibly freed.

The Measurement Model

To determine the relationships among lesbian sexual identity variables, internalization of sociocultural norms, psychological health variables, body dissatisfaction, and disordered eating, structural equation modeling (SEM) was used. SEM is a method of causal modeling analysis used to assess the plausibility of a proposed theoretical model. CFA, using EQS 6.0, was conducted on each latent variable within the measurement model to determine if all of the observed variables would be retained as indicators of the hypothesized latent variables. Each of the latent constructs (e.g., Lesbian Sexual Identity, Internalization of Norms, Social Support, Psychological Health, Body Image Concerns, and Disordered Eating) was added to the measurement model in succession and then evaluated for fit and loadings, necessitating at least 7 CFAs.

Two of the latent variables were added to the model without any modifications from the original hypotheses, Social Support and Body Image Concerns. Social Support was satisfactorily represented by the measured variables, SSQ-N and SSQ-S. Body Image Concerns was satisfactorily represented by the BSQ-R-10, MBSRQ, and the BPSS-Body Factor.

For the latent variable, Psychological Health, VAMS item #3 (“Shameful”) and VAMS item #4 (“Guilty”) were dropped, as non-significant t -values (i.e., $t < 1.96$) justified their removal. This modification suggested that the latent variable, Psychological Health, was best represented by remaining measured variables, the CES-D, RSES, VAMS items #1 (“Depressed”), 2 (“Happy”), 5 (“Confused”), 6 (“Anxiety”), and 7 (“Stressed”). Due to high overlap in the variances between VAMS items 6 (“Anxiety”)

and 7 (“Stressed”), a combined Stress/Anxiety variable was created by averaging VAMS items 6 and 7. This modification resulted in a more parsimonious model.

Measured variables also needed to be dropped when adding the Lesbian Sexual Identity latent variable. Again, low t values warranted dropping the SIDS and each of the 4 disclosure score measured variables. As a result, the latent variable was best represented by the measured variables: Comfort with Sexual Identity, Time “Out,” and Connectedness to the GLB Community.

Modifications were also made when adding the Internalization of Norms and the Disordered Eating latent variables. The measured variables, BAAR Importance of Attractiveness factor and the BULIT-R, had negative error variances. As a result, Bollen’s (1989) procedure to estimate the error variance was utilized: estimated error variance equals 1 minus scale reliability times the variance. The negative error variances for both variables were corrected using this procedure.

Following the aforementioned changes to the measurement model, fit indices for the complete measurement model were: Satorra-Bentler χ^2 (153, $N = 278$) = 243.14, $p < .05$, NFI = .89, NNFI = .92, CFI = .94, RCFI = .93; GFI = .90, standardized RMR = .07, RMSEA = .06 (90% CI = .051, .073). See Table 6 for standardized parameter estimates of the observed variables in the Measurement Model.

The Structural Model

Once the Measurement Model was confirmed, the next step was to test the Structural Model. In this step, the hypothesized relationships among the latent variables are added to the Measurement Model. In the proposed model of the development of

Disordered Eating among lesbians (see Figure 1), Lesbian Sexual Identity, Social Support, and Internalization of Norms were the exogenous latent variables, whereas Psychological Health, Body Image Concerns, and Disordered Eating were the endogenous variables. The relationships among these latent variables were based on developmental and sociocultural theories and prior research in the broad areas of sexual identity development (e.g., Cass, 1979, 1996) and body image/eating disorders (e.g., Levine & Smolak, 1992; Striegel-Moore et al., 1986) previously discussed in this paper.

On the first run, EQS computed a less than desirable solution (all fit indices < .90), suggesting that the fit of the Structural Model to the sample data was poor. As a result, modifications, based on EQS analyses and theory were made. Changes were made one at a time and were only accepted if the resultant changes were significant (Bentler, 1995). The first modification made was made to remove another extreme outlier from the SEM analyses. Removal resulted in a significant decrease in the chi-square value and reduced the sample size to 277.

The solution generated on the next run of the model was also a less than optimal fit. One of the modification indices, the Lagrange Test (which provides suggestions for adding parameters), suggested that the Internalization of Norms latent variable be moved to directly affect the Body Image Concerns latent variable. In the original model, Internalization of Norms was hypothesized to indirectly affect Body Image Concerns through the mediating variable, Psychological Health. However, the pathway from Internalization of Norms to Psychological Health failed to reach statistical significance (t -value < 1.96). Given previous research suggesting a direct relationship between

Internalization of Norms and Body Image Concerns (Stice, 1994; Striegel-Moore et al., 1986), the modification was deemed theoretically justified. A subsequent run of the model demonstrated this change significantly improved the model fit, bringing fit indices into the “good” range (i.e., GFI’s at or near .90).

Although a satisfactory model had been achieved, an additional suggested modification undertaken was the correlation of error variances among two of the Body Image Concerns measures, the MBSRQ and the BPSS Body Factor. Although a subsequent run of the model resulted in slightly higher fit indices, this modification was rejected on statistical grounds that the new solution did not significantly increase the fit of the model.

No further modifications to the Structural Model were undertaken. The resulting final model demonstrated a good fit to the sample data, with the majority of fit indices over the acceptable .90. See Table 7 for Lesbian Model of Disordered Eating fit indices.

Additional demonstration of model fit is suggested by significant loadings on all pathways in the model, with all path coefficient signs being in the expected direction. The complete Lesbian Model of Disordered Eating is shown in Figure 2. As hypothesized, Lesbian Sexual Identity and Social Support were shown to each directly affect Psychological Health ($R^2 = .20$). Although not hypothesized, it is not unexpected that Social Support and Internalization of Norms were highly negatively correlated ($r = -.53$), further implicating the role of friends and family with respect to the development and maintenance of societal mores of beauty. Women who felt more positively and strongly about their lesbian identity and reported more social supports and satisfaction related to

the quality of those supports were more likely to be psychologically healthy (e.g., higher self-esteem, less anxiety, stress, and depression). Lower indices of Psychological Health, in conjunction with higher Internalization of Norms (internalization of U.S. norms of attractiveness and beauty) were indicative of higher levels of Body Image Concerns (i.e., body dissatisfaction, body preoccupation, and lower self-ratings of attractiveness) ($R^2 = .29$). Lastly, women who reported higher levels of Body Image Concerns were more likely to develop characteristics of Disordered Eating ($R^2 = .54$).

Testing the Model in a Heterosexual Sample

Following the confirmation of the Measurement Model and Structural Model for the sample of lesbians, attempts to generalize the Lesbian Disordered Eating Model were made with the sample of heterosexual women. Once again, the first step in SEM was to confirm the Measurement Model in the new sample. This was necessary to determine whether the observed (measured) variables used to represent the latent variables for the lesbian sample would also represent the latent variables for the heterosexual sample. Modifications may be made again at this point, based upon consistency with previous theory and empirical research.

With the exception of the Lesbian Sexual Identity latent variable, all measured variables from the first study were significant and demonstrated high enough factor loadings to be retained as acceptable measures of latent variables for the heterosexual sample. In the model tested with the lesbian sample, the latent sexual identity variable was represented by Comfort with Sexuality, Time “Out,” and Connectedness to the GLB Community. For heterosexuals, however, length of time “out” and Connectedness to the

GLB Community were not necessarily applicable from a theoretical perspective. Furthermore, it is safe to assume that in a heterosexist society, such as the U.S., individuals who rate their sexuality as “exclusively heterosexual” would express minimal discomfort with their sexual identity. In addition to theoretical justification for removing this latent variable from the heterosexual model of disordered eating to be tested, EQS failed to converge on an acceptable solution for the Heterosexual Identity factor, even when all additional measured variables (e.g., SIDS scores) were tested.

Hence, the decision was made to test a model, identical to the lesbian model, without the latent variable Heterosexual Identity included. Based on the findings from the Lesbian Model of Disordered Eating, the following hypotheses were tested in a model for the development of disordered eating in a heterosexual sample (Heterosexual Model of Disordered Eating 1, see Figure 3):

1. Social Support would have a direct, positive effect on Psychological Health (Zea et al., 1999).
2. Psychological Health would have a direct, negative effect on Body Image Concerns (Beren et al., 1996; Wiederman & Pryor, 2000).
3. Internalization of Norms would have a direct, positive effect on Body Image Concerns (Stice, 1994).
4. Body Image Concerns would have a direct, positive effect on Disordered Eating (Levine & Smolak, 1992; Striegel-Moore et al., 1986)

In addition, an a priori competing model (Heterosexual Model of Disordered Eating 2, see Figure 4) was hypothesized and then tested with the heterosexual sample,

for the purpose of determining which one might better fit the data for the sample of heterosexuals. The second model was based on the original model posited in this study (see Figure 1), which contained a direct pathway from Internalization of Norms to Psychological Health (vs. the indirect pathway from Internalization of Norms to Body Image Concerns through the mediating Psychological Health variable). In the Heterosexual Model of Disordered Eating 2, the hypotheses #1, 2, and 4 were the same as for the Heterosexual Model of Disordered Eating 1. Hypotheses 3 is as follows:

3. Internalization of Norms would have a direct, negative effect on Psychological Health (Striegel-Moore, et al. 1986).

The initial solution generated for the Heterosexual Model of Disordered Eating 1 was a poor fit to the data (see Table 7). The Legrange Test suggested that adding a pathway between the Binge Scale and the MBSRQ error terms would result in a significant decrease in the chi-square value. Correlating these two errors (because of the high overlap between the two variables) would likely increase the fit of the model, but at the cost of reduced parsimony. An attempt was made to correlate these two errors on the subsequent run. While GFI's did improve slightly (GFI's ranged between .87 and .90), the model was still not a good fit to the data. In addition, correlating the error terms was problematic in that it resulted in a non-significant pathway of the BSQ error term. Instead of attempting to fix this new problem by setting the BSQ error variance to some estimated term, the conservative decision was made to return to the first run of the Heterosexual Model of Disordered Eating 1, which contained no correlated error terms. Fit indices are presented in Table 7. Parameter estimates are presented in Figure 3.

The initial solution generated for the Heterosexual Model of Disordered Eating 2 was also a poor fit to the data (GFI's ranged from .84 to .87, RMR = .10, RMSEA = .11). Similar to the first run of the Heterosexual Model of Disordered Eating 1, the Legrange Test recommended adding a pathway to correlate error terms, in this model the errors of the BPSS Body factor and the MBSRQ. Again, this modification was made on a subsequent run of the model, however, the resulting fit indices still indicated poor model fit (GFI's ranged from .85 to .89). Once again, the second run of the model was problematic in that the BSQ error term failed to reach significance. As with the Heterosexual Model of Disordered Eating 1, the decision was made to return to the first run of the model which contained no correlated error terms. Fit indices are presented in Table 7. Parameter estimates are presented in Figure 4.

Table 1

Sexual Identity Development Scale (SIDS) Items and Standardized Factor Loadings

1. My thoughts, feelings, and behaviors about my own sexuality are heterosexual. (-.95)
2. I consider myself to be heterosexual. (-.95)
3. I am comfortable with my heterosexual thoughts, feelings, and behaviors. (-.77)
4. I am currently confused about my sexual identity. (-.05)
5. There is something about my thoughts, feelings, and or/behaviors that could be called lesbian/gay. (.90)
6. I am uncomfortable with current thoughts, feelings, and/or behaviors that could be called lesbian/gay. (.04)
7. I may be homosexual and may not be heterosexual. (.83)
8. I am feeling alienation from other people. (.38)
9. I am weighing the costs and benefits of accepting a lesbian/gay identity. (.42)
10. I am probably lesbian/gay. (.95)
11. I am beginning to disclose my sexual identity to other people. (.68)
12. I am aware of society's negative views about lesbians and gays and am learning to tolerate them. (.34)
13. I am increasing personal contact with other lesbians and/or gays. (.84)
14. My identity as a lesbian/gay woman is increasing. (.94)
15. I am increasing disclosure of my sexual identity to heterosexual individuals. (.72)
16. I prefer to be lesbian/gay rather than homosexual. (.85)
17. I identify strongly with the lesbian/gay community. (.91)
18. I feel both pride about being lesbian/gay and anger towards heterosexuals as a group. (.59)
19. I have a strong sense of my lesbian/gay identity, but it is only part of who I am. (.92)
20. I feel pride in being a gay/lesbian woman and value people, regardless of whether they are heterosexual or homosexual. (.94)
21. I feel less anger towards heterosexuals than I have in the past. (.69)

Table 2

Descriptive Statistics for all Observed Variables for Total Sample and Sexuality Groups

Item/Measure	Total Sample (N = 613)		Heterosexuals (n = 294)		Lesbians (n = 280)	
	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>	<u>M</u>	<u>SD</u>
Feminist	4.20	1.29	3.58	1.15	4.84 ^b	1.12
Masc./Fem.	4.41	1.11	4.95	0.77	3.85 ^b	1.12
Comfort	6.62	0.79	6.80	0.53	6.55 ^b	0.86
% Dis. to Les.	89.41	29.04	82.56	37.25	96.09 ^b	16.27
% Dis. to Het.	81.10	31.93	90.44	26.91	77.00 ^b	32.00
% Dis. to Fam.	77.03	36.14	87.69	30.50	72.96 ^b	35.83
% Dis. to Co./Cl.	71.57	37.57	86.71	30.29	63.11 ^b	37.50
Time "Out"	81.82	118.76	3.04	26.34	164.64 ^b	124.59
Con. to GLB Com.	3.87	2.10	2.61	1.74	5.16 ^b	1.64
MBSRQ	3.31	0.87	3.36	0.88	3.30	0.85
BSQ-R-10	30.69	14.29	32.33	15.07	28.33 ^b	13.04
BAA-R	3.49	1.05	3.61	1.07	3.36 ^a	1.03
BAAR-IFIT	4.62	1.24	4.72	1.25	4.50 ^a	1.24
BAAR-IATT	2.47	1.09	2.61	1.14	2.33 ^a	1.02
CESD	18.09	11.55	19.97	10.93	16.01 ^b	12.21
SSQ6-NUM	4.76	2.16	4.79	2.14	4.84	2.23
SSQ6-SAT	4.90	1.38	4.89	1.43	4.89	1.37
RSES	4.61	1.63	4.44	1.69	4.79 ^a	1.56
BS	2.66	4.56	2.74	4.67	2.28	4.20
BULIT-R	49.22	19.28	51.64	20.45	45.73 ^b	16.96
BPSS-TOT	3.73	0.97	3.36	1.03	3.83 ^a	0.89
BPSS-BODY	3.40	1.17	3.34	1.22	3.51	1.11
SIDS	59.20	34.21	25.99	11.15	92.30 ^b	10.60
VAMS1 (Depressed)	2.39	1.08	2.78	1.11	2.26 ^a	1.06
VAMS2 (Happy)	2.24	0.82	3.85	0.81	3.67 ^a	0.82
VAMS3 (Shameful)	1.58	0.92	1.68	0.98	1.48 ^a	0.85
VAMS4 (Guilty)	1.77	0.98	1.84	1.04	1.70	0.90
VAMS5 (Confused)	2.36	1.24	2.71	1.27	2.00 ^b	1.09
STRS/ANXY	3.14	1.06	3.31	1.04	2.97 ^b	1.07

Note. Feminist = extent of feminist identity: scores range from 1 [*never*] to 6 [*always*];

Masc./Fem. = gender appearance rating: scores range from 1 [*highly masculine*] to 6

[*highly feminine*]; Comfort = comfort with sexual identity: scores range from 1 [*not comfortable at all*] to 7 [*very comfortable*]; % Dis. to Les. = disclosure of sexuality to lesbian friends: scores range from 1 to 100; % Dis. to Het. = disclosure of sexuality to heterosexual friends: scores range from 1 to 100; % Dis. to Fam. = disclosure of sexuality to family: scores range from 1 to 100; % Dis. to Co./Cl. = disclosure of sexuality to co-workers and/or classmates: scores range from 1 to 100; Time “Out” = length of time out (in months); Con. to GLB Com. = sense of connectedness to GLB community: scores range from 1 [*not at all affiliated/connected*] to 7 [*highly affiliated/connected*]; MBSRQ = appearance evaluation: overall satisfaction with appearance scores range from 1 [*negative/dissatisfied*] to 5 [*positive/satisfied*]; BSQ-R-10 = body preoccupation: extent of body concern scores range from 10 [*little or no concern*] to 60 [*high concern*]; BAA-R = beliefs about attractiveness: extent of internalization of norms scores range from 1 [*low internalization*] to 7 [*high internalization*]; BAAR-IFIT = importance of fitness subscale: scores range from 1 [*low internalization*] to 7 [*high internalization*]; BAAR-ATTN = importance of attractiveness and thinness subscale: scores range from 1 [*low internalization*] to 7 [*high internalization*]; CES-D = depression: scores range from 0 [*no depression*] to 60 [*high depression*]; SSQ6-NUM = number of social supports: scores range from 0 [*low number/availability*] to 8 [*high number/availability*]; SSQ6-SAT = satisfaction with social supports: scores range from 1 [*very dissatisfied*] to 6 [*very satisfied*]; RSES = self-esteem: scores range from 0 [*low self-esteem*] to 6 [*high self-esteem*]; BS = binge scale: binge frequency scores range from 0 [*seldom*] to 23 [*frequent*]; BULIT-R = bulimia scale: scores range from 0 [*no bulimic symptomology*] to

140 [*high bulimic symptomology*]; BPSS-TOT = total body part satisfaction: scores range from 1 [*extremely dissatisfied*] to 6 [*extremely satisfied*]; BPSS-Body = satisfaction with body subscale: scores range from 1 [*extremely dissatisfied*] to 6 [*extremely satisfied*]; SIDS = lesbian sexual identity development: scores range from 16 [*low lesbian sexual identity development*] to 112 [*high lesbian sexual identity development*]; VAMS 1 = depressed: scores range from 0 [*not at all*] to 4 [*extremely*]; VAMS 2 = happy: scores range from 0 [*not at all*] to 4 [*extremely*]; VAMS 3 = shameful: scores range from 0 [*not at all*] to 4 [*extremely*]; VAMS 4 = guilty: scores range from 0 [*not at all*] to 4 [*extremely*]; VAMS 5 = confused: scores range from 0 [*not at all*] to 4 [*extremely*]; STRS/ANXY = stress/anxiety: scores range from 0 [*not at all*] to 4 [*extremely*].

^a $p < .05$, ^b $p < .001$ indicate significant differences between Heterosexual and Lesbian Means.

Table 3

Correlation Matrix for Indicator Variables for Total Sample (n = 612)

	CMFR T	TMOU T	CNGL B	MBSR Q	BSQR	IFIT	ATTN	CESD	SSQN	SSQST	RSES	BS	BULIT R	BODY	SIDS	STAN X	VAMS 1	VAMS 2	VAMS 3	VAMS 4	VAMS 5
CMFRT	1.000																				
TMOUT	.047	1.000																			
CNGLB	-.004	.494	1.000																		
MBSRQ	.099	-.031	.027	1.000																	
BSQR	-.068	-.099	-.116	-.716	1.000																
IFIT	-.052	-.002	-.054	-.320	.427	1.000															
ATTN	-.090	-.073	-.131	-.318	.401	.629	1.000														
CESD	-.063	-.154	-.112	-.266	.336	.129	.230	1.000													
SSQN	.125	.012	.042	.136	-.118	-.080	-.195	-.210	1.000												
SSQST	.068	-.005	-.031	.063	-.043	-.080	-.185	-.123	.307	1.000											
RSES	.058	.094	.102	.458	-.428	-.233	-.287	-.529	.174	.229	1.000										
BS	-.015	-.068	-.059	-.261	.371	.194	.261	.248	-.159	-.073	-.256	1.000									
BULITR	-.070	-.133	-.103	-.540	.703	.345	.456	.375	-.149	-.111	-.468	.601	1.000								
BODY	.080	.070	.108	.718	-.723	-.288	-.238	-.246	.137	.041	.351	-.232	-.522	1.000							
SIDS	-.139	.640	.634	-.068	-.098	-.076	-.118	-.122	-.002	-.002	.072	-.032	-.112	.034	1.000						
STANX	-.060	-.198	-.081	-.236	.342	.239	.219	.495	-.096	-.055	-.399	.167	.338	-.255	-.116	1.000					
VAMS1	-.052	-.096	-.048	-.258	.336	.177	.182	.687	-.152	-.064	-.498	.227	.348	-.223	-.071	.545	1.000				
VAMS2	-.107	.070	.068	-.246	.227	.174	.171	.516	-.201	-.137	-.418	.165	.238	-.174	.125	.353	.533	1.000			
VAMS3	-.074	-.105	-.036	-.340	.398	.188	.295	.483	-.131	-.151	-.517	.282	.421	-.297	-.056	.371	.458	.262	1.000		
VAMS4	-.059	-.130	.004	-.263	.330	.171	.230	.402	-.137	-.125	-.465	.218	.370	-.275	-.031	.367	.401	.241	.688	1.000	
VAMS5	-.029	-.263	-.171	-.109	.245	.165	.151	.531	-.104	-.107	-.410	.209	.281	-.176	-.236	.557	.561	.299	.391	.359	1.000

Note. COMFRT = comfort with sexual identity: scores range from 1 [*not comfortable at all*] to 7 [*very comfortable*];

TMOUT = length of time out (in months); CNGLB = sense of connectedness to GLB community: scores range from 1 [*not at*

all affiliated/connected] to 7 [highly affiliated/connected]; MBSRQ = appearance evaluation: overall satisfaction with appearance scores range from 1 [negative/dissatisfied] to 5 [positive/satisfied]; BSQR = body preoccupation: extent of body concern scores range from 10 [little or no concern] to 60 [high concern]; IFIT = importance of fitness subscale: scores range from 1 [low internalization] to 7 [high internalization]; ATTN = importance of attractiveness and thinness subscale: scores range from 1 [low internalization] to 7 [high internalization]; CESD = depression: scores range from 0 [no depression] to 60 [high depression]; SSQN = number of social supports: scores range from 0 [low number/availability] to 8 [high number/availability]; SSQST = satisfaction with social supports: scores range from 1 [very dissatisfied] to 6 [very satisfied]; RSES = self-esteem: scores range from 0 [low self-esteem] to 6 [high self-esteem]; BS = binge scale: binge frequency scores range from 0 [seldom] to 23 [frequent]; BULITR = bulimia scale: scores range from 0 [no bulimic symptomology] to 140 [high bulimic symptomology]; BODY= satisfaction with body subscale: scores range from 1 [extremely dissatisfied] to 6 [extremely satisfied]; SIDS = lesbian sexual identity development: scores range from 16 [low lesbian sexual identity development] to 112 [high lesbian sexual identity development]; STANX = stress/anxiety: scores range from 0 [not at all] to 4 [extremely]; VAMS 1 = depressed: scores range from 0 [not at all] to 4 [extremely]; VAMS 2 = happy: scores range from 0 [not at all] to 4 [extremely]; VAMS 3 = shameful: scores range from 0 [not at all] to 4 [extremely]; VAMS 4 = guilty: scores range from 0 [not at all] to 4 [extremely]; VAMS 5 = confused: scores range from 0 [not at all] to 4 [extremely].

$p < .05$ for r 's $\geq .088$, $p < .01$ for r 's $\geq .115$, $p < .0001$ for r 's $\geq .146$.

Table 4

Correlation Matrix for Indicator Variables for Heterosexuals (n = 291)

	CMFR T	TMOU T	CNGL B	MBSR Q	BSQR	IFIT	ATTN	CESD	SSQN	SSQST	RSES	BS	BULIT R	BODY	SIDS	STAN X	VAMS 1	VAMS 2	VAMS 3	VAMS 4	VAMS 5
CMFRT	1.000																				
TMOUT	.044	1.000																			
CNGLB	-.148	.071	1.000																		
MBSRQ	.073	.011	-.048	1.000																	
BSQR	-.047	-.028	.064	-.724	1.000																
IFIT	-.035	.040	-.037	-.349	.482	1.000															
ATTN	-.061	-.008	-.038	-.339	.415	.591	1.000														
CESD	-.026	.014	.115	-.303	.378	.160	.232	1.000													
SSQN	.106	.004	.044	.057	-.093	-.030	-.194	-.247	1.000												
SSQST	-.030	-.017	-.018	.050	-.042	.050	-.130	-.193	.347	1.000											
RSES	.043	-.057	-.089	.526	-.482	-.287	-.294	-.542	.145	.289	1.000										
BS	-.010	-.015	.145	-.402	.543	.288	.283	.279	-.109	-.025	-.381	1.000									
BULITR	-.048	-.010	-.110	-.555	.719	.339	.465	.392	-.129	-.094	-.520	.776	1.000								
BODY	.052	-.014	.037	.733	-.709	-.298	-.227	-.243	.057	.047	.376	-.363	-.512	1.000							
SIDS	-.165	.439	.415	-.069	.040	.075	.002	-.189	-.076	-.008	.130	.141	.072	-.019	1.000						
STANX	-.032	.049	.106	-.270	.353	.313	.220	.511	-.033	-.068	-.405	.194	.312	-.240	.107	1.000					
VAMS1	.017	-.022	.118	-.313	.373	.239	.196	.755	-.162	-.105	-.526	.279	.380	-.220	.103	.569	1.000				
VAMS2	.093	-.060	-.141	.288	-.279	-.181	.192	-.526	.236	.223	.473	-.231	-.268	.227	-.184	-.333	-.474	1.000			
VAMS3	-.107	.022	.139	-.320	.417	.231	.289	.543	-.165	-.178	-.546	.354	.458	-.290	.137	.400	.499	-.230	1.000		
VAMS4	-.077	-.000	.164	-.235	.337	.201	.255	.478	-.151	-.173	-.474	.323	.433	-.258	.121	.367	.439	-.257	.723	1.000	
VAMS5	.019	.000	.070	-.147	.228	.215	.102	.548	-.071	-.098	-.405	.187	.246	-.160	.143	.579	.581	-.298	.389	.338	1.000

Note. COMFRT = comfort with sexual identity: scores range from 1 [*not comfortable at all*] to 7 [*very comfortable*];

TMOUT = length of time out (in months); CNGLB = sense of connectedness to GLB community: scores range from 1 [*not at*

all affiliated/connected] to 7 [highly affiliated/connected]; MBSRQ = appearance evaluation: overall satisfaction with appearance scores range from 1 [negative/dissatisfied] to 5 [positive/satisfied]; BSQR = body preoccupation: extent of body concern scores range from 10 [little or no concern] to 60 [high concern]; IFIT = importance of fitness subscale: scores range from 1 [low internalization] to 7 [high internalization]; ATTN = importance of attractiveness and thinness subscale: scores range from 1 [low internalization] to 7 [high internalization]; CESD = depression: scores range from 0 [no depression] to 60 [high depression]; SSQN = number of social supports: scores range from 0 [low number/availability] to 8 [high number/availability]; SSQST = satisfaction with social supports: scores range from 1 [very dissatisfied] to 6 [very satisfied]; RSES = self-esteem: scores range from 0 [low self-esteem] to 6 [high self-esteem]; BS = binge scale: binge frequency scores range from 0 [seldom] to 23 [frequent]; BULITR = bulimia scale: scores range from 0 [no bulimic symptomology] to 140 [high bulimic symptomology]; BODY= satisfaction with body subscale: scores range from 1 [extremely dissatisfied] to 6 [extremely satisfied]; SIDS = lesbian sexual identity development: scores range from 16 [low lesbian sexual identity development] to 112 [high lesbian sexual identity development]; STANX = stress/anxiety: scores range from 0 [not at all] to 4 [extremely]; VAMS 1 = depressed: scores range from 0 [not at all] to 4 [extremely]; VAMS 2 = happy: scores range from 0 [not at all] to 4 [extremely]; VAMS 3 = shameful: scores range from 0 [not at all] to 4 [extremely]; VAMS 4 = guilty: scores range from 0 [not at all] to 4 [extremely]; VAMS 5 = confused: scores range from 0 [not at all] to 4 [extremely].

$p < .05$ for r 's $\geq .138$, $p < .01$ for r 's $\geq .181$, $p < .0001$ for r 's $\geq .230$.

Table 5

Correlation Matrix for Indicator Variables for Lesbians (n = 280)

	CMFR T	TMOU T	CNGL B	MBSR Q	BSQR	IFIT	ATTN	CESD	SSQN	SSQST	RSES	BS	BULIT R	BODY	SIDS	STAN X	VAMS 1	VAMS 2	VAMS 3	VAMS 4	VAMS 5
CMFRT	1.000																				
TMOUT	.241	1.000																			
CNGLB	.279	.280	1.000																		
MBSRQ	.042	.007	.163	1.000																	
BSQR	-.038	-.037	-.158	-.724	1.000																
IFIT	-.053	-.121	-.021	-.296	.347	1.000															
ATTN	-.104	.054	-.086	-.302	.360	.660	1.000														
CESD	-.116	-.079	-.145	-.277	.227	.053	.193	1.000													
SSQN	.111	-.004	.020	.222	-.142	-.132	-.186	-.184	1.000												
SSQST	-.152	-.026	-.065	.091	-.057	-.212	-.250	-.037	.276	1.000											
RSES	.066	.077	.224	.424	-.359	-.130	-.271	-.489	.210	.134	1.000										
BS	.033	-.048	-.068	-.405	.440	.237	.257	.264	-.178	-.133	-.325	1.000									
BULITR	-.010	-.070	-.140	-.570	.676	.298	.385	.349	-.158	-.145	-.417	.773	1.000								
BODY	.066	.084	.212	.706	-.724	-.259	-.238	-.251	.231	.045	.324	-.329	-.524	1.000							
SIDS	.230	.026	-.117	-.063	.084	-.025	.022	.056	.028	-.004	-.048	-.038	.083	-.120	1.000						
STANX	-.067	-.203	-.074	-.218	.276	.130	.179	.451	-.149	-.022	-.363	.232	.322	-.237	.062	1.000					
VAMS1	-.104	-.051	-.120	-.235	.280	.068	.133	.619	-.160	-.015	-.448	.243	.299	-.221	.046	.540	1.000				
VAMS2	.108	.009	.110	.225	-.228	-.178	-.194	-.571	.196	.062	.404	-.237	-.284	.158	-.013	-.441	-.627	1.000			
VAMS3	-.114	-.126	-.133	-.409	.375	.146	.334	.435	-.123	-.119	-.512	.312	.421	-.330	.086	.339	.432	-.347	1.000		
VAMS4	-.049	-.199	-.098	-.305	.276	.131	.210	.345	-.137	-.065	-.497	.195	.285	-.280	-.012	.356	.380	-.295	.659	1.000	
VAMS5	-.156	-.179	-.116	-.106	.196	.018	.102	.473	-.139	-.101	-.369	.170	.262	-.174	.050	.505	.563	-.419	.395	.396	1.000

Note. COMFRT = comfort with sexual identity: scores range from 1 [*not comfortable at all*] to 7 [*very comfortable*];

TMOUT = length of time out (in months); CNGLB = sense of connectedness to GLB community: scores range from 1 [*not at*

all affiliated/connected] to 7 [highly affiliated/connected]; MBSRQ = appearance evaluation: overall satisfaction with appearance scores range from 1 [negative/dissatisfied] to 5 [positive/satisfied]; BSQR = body preoccupation: extent of body concern scores range from 10 [little or no concern] to 60 [high concern]; IFIT = importance of fitness subscale: scores range from 1 [low internalization] to 7 [high internalization]; ATTN = importance of attractiveness and thinness subscale: scores range from 1 [low internalization] to 7 [high internalization]; CESD = depression: scores range from 0 [no depression] to 60 [high depression]; SSQN = number of social supports: scores range from 0 [low number/availability] to 8 [high number/availability]; SSQST = satisfaction with social supports: scores range from 1 [very dissatisfied] to 6 [very satisfied]; RSES = self-esteem: scores range from 0 [low self-esteem] to 6 [high self-esteem]; BS = binge scale: binge frequency scores range from 0 [seldom] to 23 [frequent]; BULITR = bulimia scale: scores range from 0 [no bulimic symptomology] to 140 [high bulimic symptomology]; BODY= satisfaction with body subscale: scores range from 1 [extremely dissatisfied] to 6 [extremely satisfied]; SIDS = lesbian sexual identity development: scores range from 16 [low lesbian sexual identity development] to 112 [high lesbian sexual identity development]; STANX = stress/anxiety: scores range from 0 [not at all] to 4 [extremely]; VAMS 1 = depressed: scores range from 0 [not at all] to 4 [extremely]; VAMS 2 = happy: scores range from 0 [not at all] to 4 [extremely]; VAMS 3 = shameful: scores range from 0 [not at all] to 4 [extremely]; VAMS 4 = guilty: scores range from 0 [not at all] to 4 [extremely]; VAMS 5 = confused: scores range from 0 [not at all] to 4 [extremely].

$p < .05$ for r 's $\geq .138$, $p < .01$ for r 's $\geq .181$, $p < .0001$ for r 's $\geq .230$.

Table 6

Standardized Parameter Estimates for the Measurement Model

Latent Variable	Observed	Factor	Error
	Variable	Loading	Estimate
Lesbian Sexual Identity	Comfort with Sexuality	.49	.81
	Time “out”	.49	.87
	Connectedness to GLB Comm.	.57	.82
Internalization of Norms	Importance of Fitness	.74	.68
	Importance of Attr. & Thinness	.93	.38
Social Support	Number of Supports	.54	.85
	Satisfaction with Supports	.48	.88
Psychological Health	VAMS1 – “sad”	-.82	.58
	VAMS2 – “happy”	.70	.71
	VAMS5 – “confused”	-.65	.76
	RSES	.61	.79
	CES-D	-.91	.42
	“Anxiety/Stress”	-.64	.77
Body Image Concerns	BPSS – BODY	-.82	.58
	MBSRQ	-.83	.55
	BSQ-R-10	.89	.46
Disordered Eating	BULIT-R	.96	.27
	BINGE Scale	.79	.62

Table 7

Goodness of Fit Indices for the Disordered Eating Models

Model	χ^2	df	p	NFI	NNFI	CFI	GFI	RMR	RMSEA (90% CI)
Lesbian ^a	262.74	131	0.00	.88	.92	.93	.90	.07	.07 (.05, .08)
Hetero. 1 ^b	303.27	87	0.00	.85	.86	.88	.86	.10	.10 (.09, .11)
Hetero. 2 ^c	328.97	87	0.00	.84	.84	.87	.85	.10	.11 (.10, .12)

Note. Lesbian^a = Lesbian Model of Disordered Eating ($n = 277$); Hetero. 1^b =

Heterosexual Model of Disordered Eating 1 ($n = 292$); Hetero. 2^c = Heterosexual Model

of Disordered Eating 2 ($n = 292$); χ^2 = Satorra-Bentler chi-square, df = degrees of

freedom, p = probability; NFI = Normed fit index (values greater than .90 indicate a good

fitting model); NNFI = Non-normed fit index (values greater than .90 indicate a good

fitting model); CFI = Comparative fit index (values greater than .90 indicate a good

fitting model); GFI = Goodness of fit index (values greater than .90 indicate a good

fitting model); RMR = Root mean square residual (values between .05 and .08 represent

fair, acceptable fits); RMSEA = Root mean error of approximation (values between .05

and .08 represent fair, acceptable fits).

Figure 1 - Hypothesized Lesbian Model of Disordered Eating

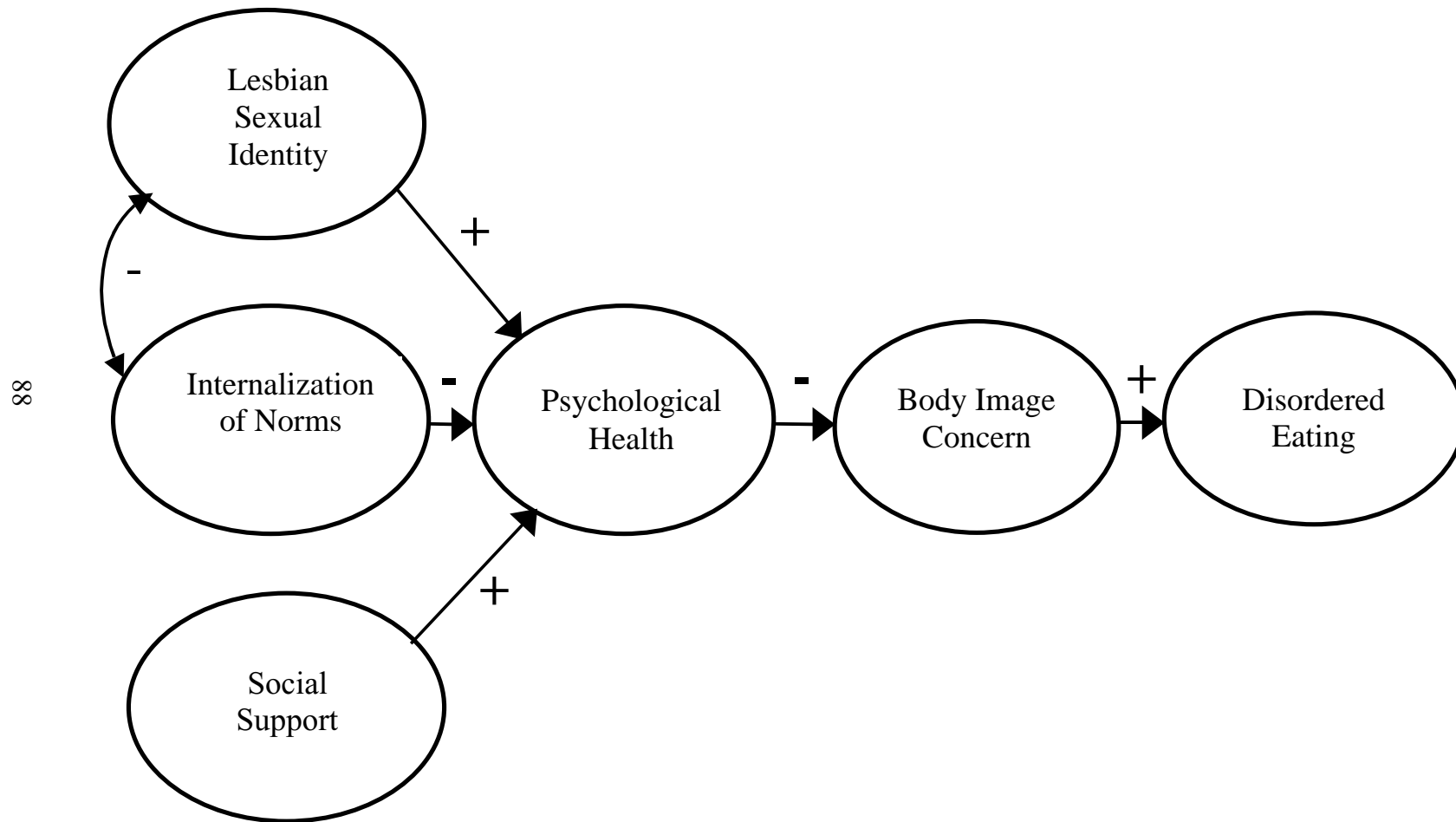


Figure 2 — Lesbian Model of Disordered Eating

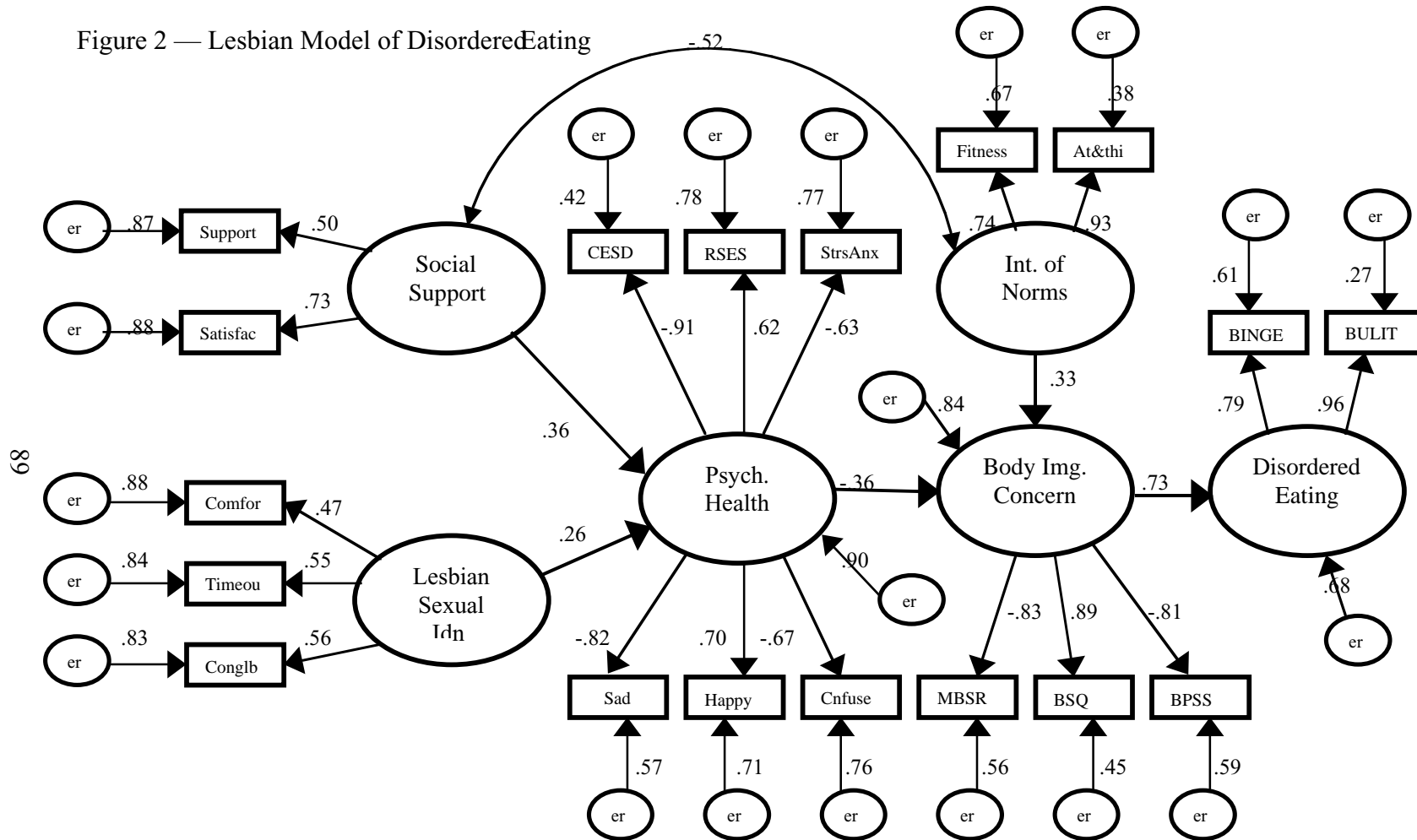


Figure 3 — Heterosexual Model of Disordered Eating 1

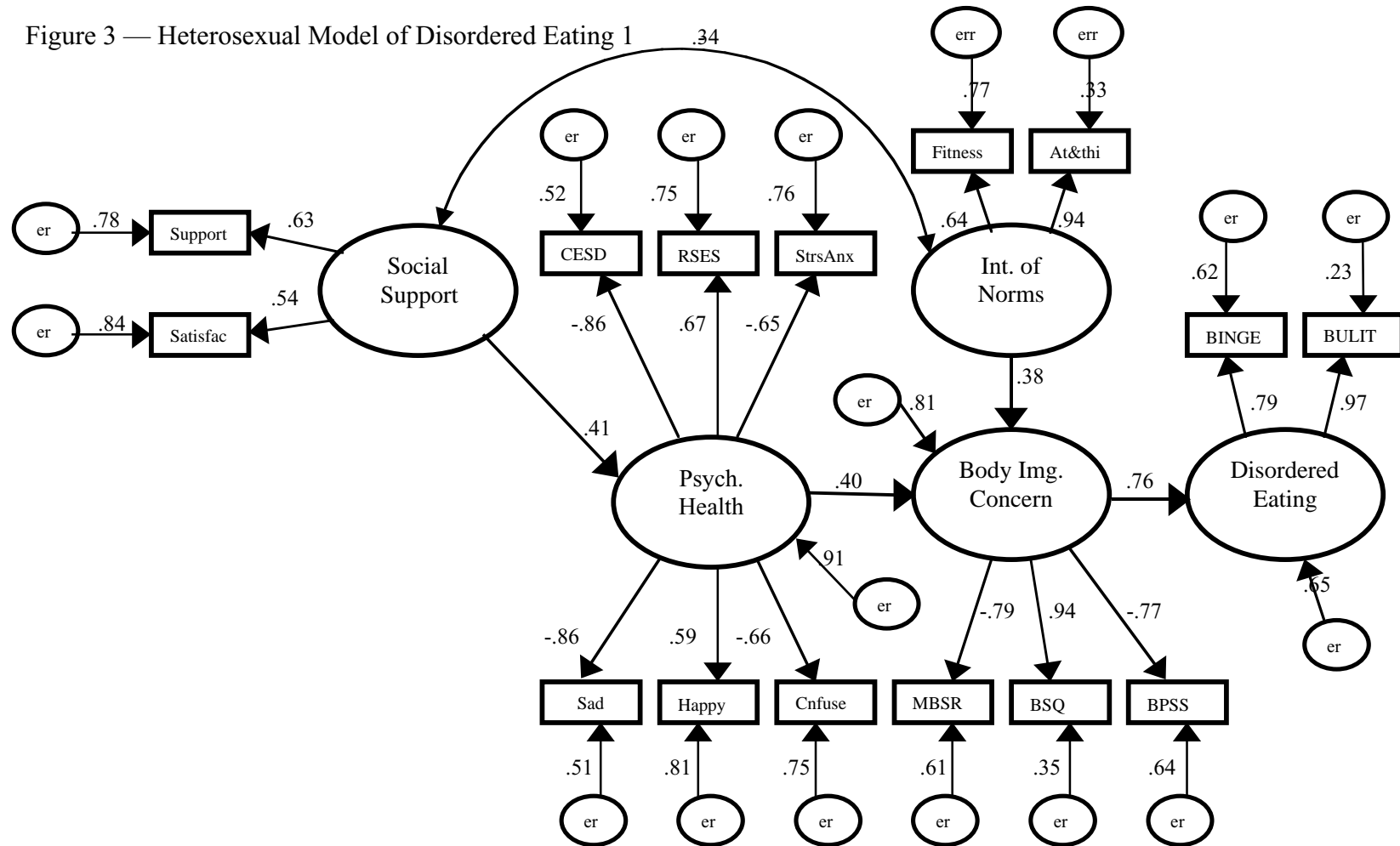
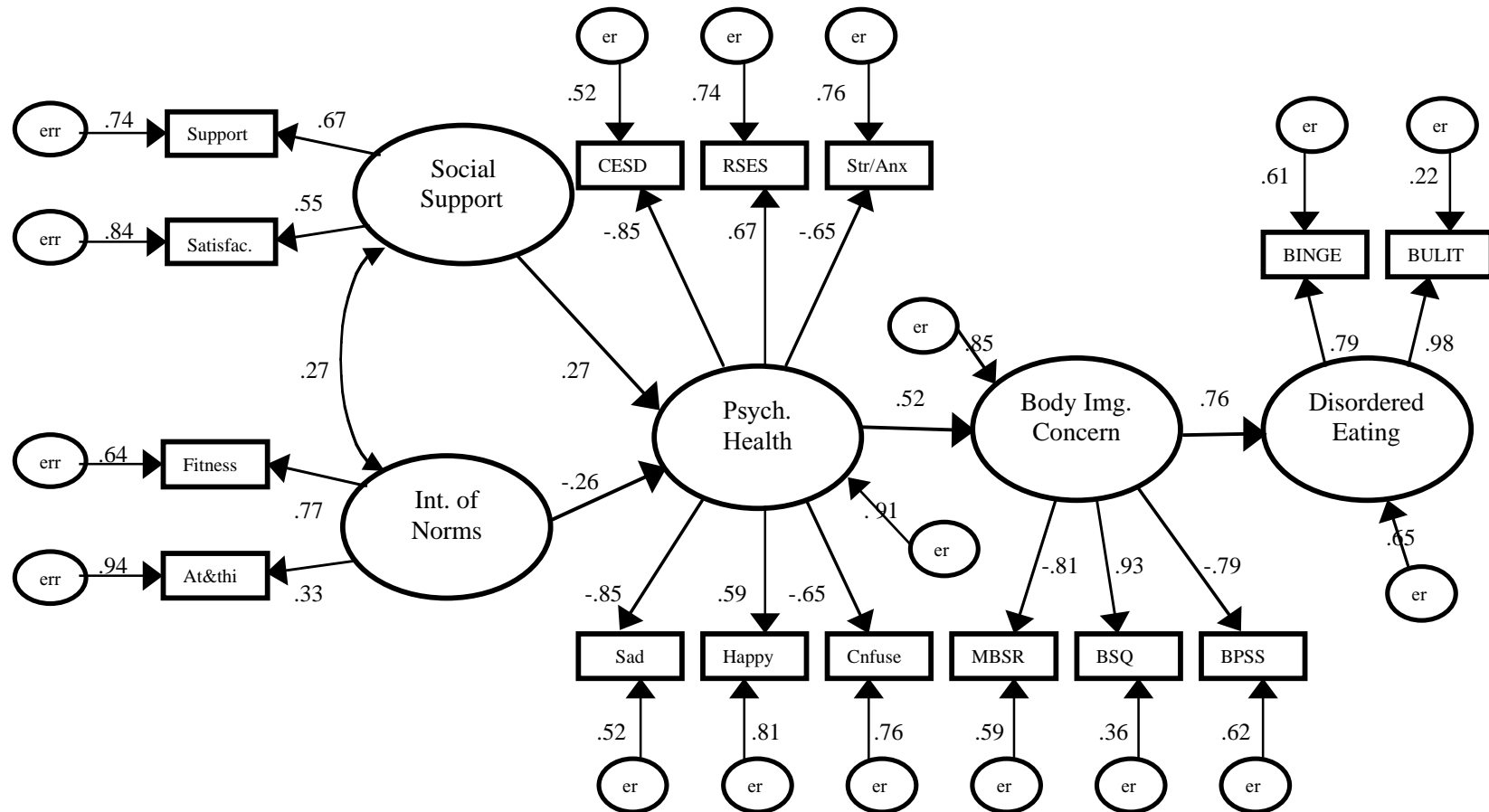


Figure 4 — Heterosexual Model of Disordered Eating 2



CHAPTER IV

DISCUSSION

The purpose of this study was to test a hypothesized model for the development of disordered eating in a sample of lesbians using structural equation modeling procedures. Recently, eating disorder researchers have begun focusing on sexual orientation as a variable that may affect prevalence rates (e.g., Lakkis, Ricciardelli, & Williams, 1999; Schneider et al., 1995; Strong, Williamson, Netemeyer, & Geer, 2000). This within-group investigation was designed to explore factors that contribute to body dissatisfaction and the development of eating disorders among lesbians, which included factors relevant to all women (e.g., psychological health) as well as factors relevant for homosexual women (e.g., lesbian sexual identity). Although previous researchers have implicated the relationships among factors such as internalization of norms (Stice, 1994), affiliation with the lesbian community (Heffernan, 1996; Beren et al., 1996), psychological health (Striegel-Moore et al., 1986), social support (Zea et al., 1999), and body image disturbance (Wiederman & Pryor, 2000), this study was the first to test the influence of these factors in a comprehensive model using multivariate statistics to examine interactions among the variables.

Although researchers have theorized that being a lesbian may afford some women protection from body image concerns and the subsequent development of an eating disorder (Brown, 1987), results of previous empirical investigations have been mixed (e.g., Beren et al., 1996; Siever, 1994). The findings from this study support Brown's

contention that the adoption of a positive lesbian identity may serve a protective function for some. In addition, the results of this investigation provide initial support for the continued testing of the Lesbian Model of Disordered Eating. Overall, the model fit the data well, suggesting that Lesbian Sexual Identity, Social Support, Psychological Health, and Internalization of Norms all indirectly affect the development of Disordered Eating through the mediating variable, Body Image Concerns. In the following sections, the lesbian sexual identity construct, as well as the specific pathways of the Lesbian Model of Disordered Eating will be addressed.

Lesbian Sexual Identity

The Lesbian model was unique in that it included a Lesbian Sexual Identity construct (LSI). Specifically, this latent variable was best represented by comfort with one's sexuality, connectedness to the GLB community, and time "out." This factor was significant in the prediction of Psychological Health, with LSI accounting for a significant amount of the variance in Psychological Health. A stronger, more positive sexual identity was associated with higher self-esteem and fewer symptoms of depression and anxiety. This finding is consistent with Shupak-Neuberg and Nemeroff's (1993) contention that identity disturbance may be an integral component in the development of disordered eating behaviors in women who are or have questioned their heterosexuality.

Ericson (1968) described identity consolidation as a developmental task for adolescents. Lesbians, however, typically do not begin to consolidate their identities until their early 20's, on average (Rust, 1997), nor do they tend to develop a positive lesbian identity until between the ages of 24 and 29 (Garnets & Kimmel, 1993). Hence, it is not

surprising that when a woman who had previously assumed a heterosexual identity begins to question her sexuality, her psychological health may be negatively affected (e.g., depressed mood, lower self-esteem).

Another interesting finding regarding the LSI factor was that neither the strength of a woman's feminist orientation nor her appearance orientation (i.e., self-rating on a masculine-feminine continuum) represented the latent construct. Although the adoption of a strong feminist orientation and identification as a lesbian have been linked (e.g., Guille & Chrisler, 1999), it seems incorrect to infer that all lesbians adopt and increase their feminist orientation as they solidify their lesbian identification. Data from the current investigation reflect very weak associations between adoption of a feminist identity, time "out," and connectedness to the GLB community. Furthermore, no relationship existed between comfort with one's sexuality and feminist identity. One explanation for these findings may be that the relationship between feminist identity and lesbian identity may be non-linear. Perhaps one's feminist identity peaks in the earlier or middle stages of LSI development and wanes in importance as a woman feels more comfortable with her lesbian identity and the relative importance of her sexual identity is put in the context of her overall identity.

As for the non-significance of the masculinity-femininity measure, this result again speaks to the heterogeneity of lesbians as a group. Not all lesbians are masculine, nor do they necessarily become more-so over time. Although the lesbians in this sample did rate themselves as more masculine than the heterosexual women, it appears that the

difference was not significantly related to the process of developing a lesbian sexual identity.

Furthermore, analysis of the Lesbian Sexual Identity factor revealed concerns about the sexual identity development measure, the SIDS, created for this study. Modeled after Cass (1979, 1996) stage model of sexual identity development, it was hypothesized that distinct factors, each one representing one of the 6 hypothesized stages, would emerge from the scale items. Surprisingly, exploratory factor analysis of the SIDS resulted in a single-factor solution, conceptualized as the strength of a lesbian sexual identity. This finding challenges the assumption of distinct, generic, and orderly stages of sexual identity development and supports a more flexible, non-linear conceptualization that posits variation and change are the norm (e.g., Rust, 1997).

Another plausible explanation, however, for the failure of the SIDS to conform to Cass stages may stem from methodical problems related to the development of the measure. The rating scale used for each SIDS item may have been confusing for some participants. Respondents were asked to rate the extent to which they believed statements to be true about themselves. For example, question #11 reads, I am beginning to disclose my sexual identity to other people. If someone is already "out," this researcher assumed the respondent would strongly disagree with the statement. However, this question may have also been answered in the opposite direction, strongly agree, if respondents did not focus on the words "beginning to" in the item. Analysis of each item did reveal a number of bi-modal response pattern distributions. The fact that the SIDS failed to load on the LSI construct may have been a result of poor design.

Lastly, the significance of the LSI variable within the Lesbian Model of Disordered Eating provides additional compelling evidence for the continued inclusion of sexual orientation as a demographic variable when assessing for disordered attitudes and behaviors related to body image and eating concerns. Beyond the idea that women are at greater risk of developing an eating disorder than men, within the dimension of a woman's sexual orientation, there are distinctions of risk as well. Although being a lesbian, in and of itself, may not fully insulate a woman from the development of body image concerns, as Brown (1987) and other sociocultural theorists have suggested, being a lesbian may afford women some protection. Notably, a more positive, stronger lesbian sexual identity appears to be associated with greater psychological health.

That the LSI pathway to Psychological Health was both positive and significant supports previous research suggesting that movement towards a more consolidated self-identity is associated with better psychological functioning (i.e., less depression and anxiety, higher self-esteem) (Falco, 1996; Jordan & Deluty, 1988). This finding is also consistent with Heffernan's (1996) finding that increased GLB community involvement was predictive of the psychological health of lesbians. Following the Lesbian model, counselors working with women questioning their sexuality have an opportunity to affect the potential development of disordered eating by encouraging their client's sexual identity exploration and connection to the GLB community. Meeting this objective could be achieved by a counselor who simply conveys acceptance, creates a safe therapeutic environment, and provides links to people and community groups that might increase a

woman's comfort with her sexuality, and subsequently, her overall state of psychological health.

Internalization of Norms

The second hypothesized pathway, a negative relationship from Internalization of Norms to Psychological Health, failed to fit the original Lesbian model. Instead of indirectly affecting Body Image Concerns through the mediating variable Psychological Health, Internalization of Norms directly influenced it. The improved model fit that resulted after the pathway was moved is consistent with Stice and Shaw's (1994) theory that internalization of norms could influence body image concerns through one of two pathways, either: (1) directly, or (2) indirectly through the mediating variable negative affect. Internalization of Norms accounted for a significant amount of the variance in Body Image Concerns. As hypothesized, Internalization of Norms was represented by the perceived importance of being physically fit as well as being attractive and thin.

The significance of the pathway between Internalization of Norms and Body Image Concerns in both the Lesbian and the Heterosexual models speaks to the importance of adopting a sociocultural perspective when studying body image and eating concerns (e.g., Petrie et al., 1996, Siever, 1996; Striegel-Moore et al., 1986). For instance, Siever (1996) adapted the "acquired vulnerability hypothesis" and applied it to the development of eating disorders within a sociocultural framework. He asserts that EDs result from the interaction of (1) individual vulnerability, which includes hereditary influences as well as developmental, environmental, and learning histories; (2) stressful life events; and (3) moderator variables, for instance, social support. The underlying

assumption is that EDs are acquired through the socialization process and continual societal reinforcement.

Pressure to be attractive, thin, and fit, in addition to the stigmatization of being overweight, leave many women in the US dissatisfied with their bodies, regardless of the accuracy of their perceived body characteristics (Striegel-Moore et al., 1986). Hence, another avenue for intervention could be to design programs and/or tailor therapy to examine, question, and challenge internalized norms related to standards of beauty and attractiveness. Although theorists suggest these beliefs may be deeply rooted for all women (e.g., Dworkin, 1989; Siever, 1996; Striegel-Moore et al., 1986), they are not immutable to change, as suggested by qualitative studies on lesbian beauty norms (Cogan, 1999, Myers et al., 1999).

Myers et al. (1999) reported that younger lesbians, most notably, experienced conflicted feelings and cognitive dissonance about beauty norms as a result of trying to balance their desire to fit into both lesbian and heterosexual cultures. As suggested by Myers et al. (1999), a woman may decide to reject her long-standing belief that underarm and leg hair needs to be shaved as she immerses herself in a community of lesbians with less rigid adherence to traditional beauty norms. Feeling societal pressure, especially in the company of heterosexuals, however, this same woman may decide to go against her newly adopted belief and shave anyways to mitigate potential ridicule. After she has removed her underarm and leg hair, she may experience guilt about not having had the courage to tolerate societal disapproval. Over time, however, Myers et al. (1999) found that as lesbians became more secure with their sexual identities, they were better able to

tolerate social pressures and their conflicted feelings decreased. Cogan (1999) found that the most frequently cited appearance changes related to “coming out” as a lesbian were to cut one's hair, wear more comfortable clothing, and give up traditional beauty rituals (e.g., shaving, wearing high heels and make-up). All of these changes represent movement away from traditional beauty and attractiveness norms for women.

The results of this investigation, however, do not support a direct association between adopting a lesbian identity and rejecting internalized norms of attractiveness and beauty. One explanation is offered by Dworkin (1989), who asserted that all women, through the socialization process, experience the desire to mold their bodies to fit man's image of a woman. Although lesbians may reject traditional female values and question males' control over and image of the female body, internalization of appearance-related expectations is so strong that self-beliefs may not be easily altered. Myers et al. (1999) suggested that lesbians may make appearance-related changes away from traditional norms as a marker to make them more identifiable to other lesbians. These changes, as suggested by Cogan (1999), may be more important earlier on in the sexual identity development process. Hence, the lesbians in this study may have made appearance-related changes to become more identifiable, while simultaneously holding onto traditional notions of what they should look like. And if, as Cogan (1999) suggested, these changes are more important in an earlier phase of the development process, a linear relationship between adoption of a lesbian identity and rejection of societal norms may not accurately reflect potential shifts in beliefs about attractiveness.

Social Support

The third hypothesized pathway in the Lesbian model, a positive, direct pathway from Social Support to Psychological Health, significantly contributed to the model and accounted for a significant amount of the variance in Psychological Health. The greater the total number of people in and satisfaction with one's perceived support system, the more likely women were to report positive characteristics of psychological health. Not surprisingly, this finding supports previous theory and research (Falco, 1996; Zea et al., 1999) that highlights the importance of social support for a positive well-being, as well as the role social support plays in more comprehensive theories of eating disorders, such as Siever's (1996) ED vulnerability hypothesis.

For lesbians living in a heterosexual society, the decision to disclose one's sexuality is often made daily. Especially for neophyte lesbians, stress related to deciding who, if, and when to disclose is inevitable (Falco, 1986). Stressors may also be compounded for lesbians who feel they have lost the support of their families by asserting their homosexuality (Thompson, 1996). With family and friends who are most likely heterosexual, lesbians may feel alienated from their immediate support network and begin to seek out like-minded women and men for support (Cass, 1979). Although the results of this investigation do not suggest that lesbians' support networks change significantly in number or quality with respect to the strength of their sexual identity, one time data collection may have missed individual changes in support networks over time. For instance, it is possible that support network shifts are made gradually, with

substitutions being made for supports who are no longer satisfying or available. In this manner, support networks would stay consistent with respect to number and satisfaction.

Whether or not support networks shift significantly when lesbians assert their sexuality, the results of this investigation reinforce the psychological protection offered by a satisfying support network. Thus, another way for counselors to be of service to women at risk is to bolster their support system by encouraging the formation of satisfying interpersonal relationships. For counselors, especially who espouse a dynamic or interpersonal theoretical orientation, the relationship between therapist and client can offer in-the-moment opportunities to address interpersonal dynamics that may influence the quality of clients' support networks outside of therapy. For some clients, support and/or process groups may also be advocated to enhance the quality of support systems as well (Yalom, 1995).

Psychological Health

The fourth hypothesized pathway in the Lesbian model, a direct, negative pathway from Psychological Health to Body Image Concerns, significantly contributed to the model and accounted for a significant amount of the variance in Body Image Concerns. Indicators of Psychological Health included self-esteem, depression, anxiety, and confusion. Two additional indicators, shame and guilt, did not define Psychological Health as hypothesized. One explanation might be because even among lesbians who feel psychologically healthy, feeling shame and guilt may be a routine part of their daily experience. In a culture with few positive role models to identify with, lesbian invisibility reminds women that they are in the minority on a daily basis.

Additionally, subtle heterosexist messages are encountered daily and may result in shame and guilt. For instance, a psychologically healthy lesbian, in conversation with a heterosexual co-worker, is asked about what appears to be wedding ring on her left finger. The co-worker friend might use the "he" pronoun when asking about the lesbian's husband. If the lesbian makes a decision to not correct the error and lies (perhaps even if a lie by omission) to the co-worker for fear of losing her job upon being outed, she may subsequently feel guilty about not sharing her true identity.

Following the Lesbian model, the more secure a woman feels about her lesbian identity, in conjunction with the more social support she perceives, the more positive her psychological health. Furthermore, this finding confirms that women reporting a greater sense of overall well-being are, in part, protected from developing negative feelings about their bodies. The direct, negative pathway between Psychological Health and Body Image Concerns is consistent with previous research suggesting negative affect is a precursor to body image disparagement (Beren et al., 1996; Wiederman & Pryor, 2000).

Lesbians feeling uncomfortable with their sexual identity may report low self-esteem, potentially as a result of feeling that part of who they are is bad and must be hidden (Falco, 1996). For the majority of lesbians, sexual identity development may not occur until after adolescence (Rust, 1997). Hence, it is possible that self-esteem may be further negatively impacted due to the off-time nature of the developmental shift in identity when women realize they must reject their previously internalized heterosexuality and repeat a developmental task typical of adolescence.

Body Image Concerns and Disordered Eating

Body Image Concerns, as hypothesized, positively predicted Disordered Eating and accounted for a significant amount of the total variance in Disordered Eating. Body Image Concerns was represented by body part dissatisfaction, negative evaluation of appearance, and body preoccupation. Significant independent predictors of Body Image Concerns were Internalization of Norms and Psychological Health. Thus, women feeling psychologically distressed with highly internalized unrealistic standards of beauty were at most risk of feeling negatively about and being preoccupied with their bodies. Following the Lesbian model, feelings of low self-worth may increase susceptibility to body image concerns and disordered eating. Given societal pressures to be thin and the view that being thin is equated with feeling successful, people with low self-esteem may see altering the presentation of their body as a way to achieve happiness and success (Johnson & Connors, 1987).

Although dieting was measured indirectly in the Lesbian model, the finding that body image concerns predicted bingeing and bulimic symptoms corroborates significant evidence that body image concerns are a precursor to dieting, which can then lead to disordered eating behaviors (Johnson & Connors, 1987; Striegel-Moore et al., 1986; Wiederman & Pryor, 2000). Johnson and Connors (1987) outlined the functional adaptation of dieting, which helps to explain how dieting might lead to disordered eating. Once unrealistic beauty norms have been internalized, self-esteem is low, and anxiety and negative affect are high, the pursuit of thinness emerges as a way for women to achieve a sense of control and compete amongst themselves (Johnson & Connors, 1987). For women, thinness is highly valued and seen as an avenue for securing envy and respect.

Weighing oneself is a method for concretely measuring control, which has the potential to raise self-esteem when weight goals are met.

When women fail to measure up to their body image ideals, bulimic symptoms may result as the expression of an affective disorder (Johnson & Connors, 1987).

Prolonged periods of calorie deprivation, which heighten affective instability, in conjunction with some disruptive life event (e.g., interpersonal rejection) can result in binge eating. Specifically, the semistarvation state leads to obsessions about food and prolonged eating behaviors. Over time, physiological responses to eat override defenses which serve to maintain disordered eating patterns (e.g., believing that restrictive eating signifies control over life events) and a binge occurs. Resulting feelings of guilt and failure will reinforce dieting and bingeing patterns (Johnson & Connors, 1987).

The binge serves the purpose of regulating affect and self-nurturing, which can also become an adaptive cycle. Purging behaviors, however, may follow as a result of a painful feeling of fullness and resulting panic over loss of control, fear of discovery, and/or weight gain. Purging behaviors serve to reduce tension, and can be a form of punishment, cleansing, and reassertion of control. In the absence of immediate, apparent, negative consequences, the cycle is sustained (Johnson & Connors, 1987).

Although the Johnson and Connors (1987) model offers an explanation for the connection between internalization of norms, body image concerns, and disordered eating, it may not completely account for the lesbian experience. An additional explanation for the development of disordered eating among lesbians was posited by Thompson (1994). Her trauma-based model incorporates references to women's

homosexual identity development. Although Thompson (1994) acknowledges the role of internalized norms and supports the adoption of a sociocultural approach, she does not agree that disordered eating is largely a result of women's desires to measure up to an ideal. Her multicultural lens focuses on the adaptiveness of disordered eating in response to "disordered" environments. She asserted that specific traumas (e.g., sexual and physical abuse) as well as broader trauma associated with societal oppression and discrimination (e.g., poverty, racism, sexism, and homophobia) are the initial stimuli that lead women to develop disordered eating patterns.

Thompson's (1994) model was based on qualitative research interviews with a diverse sample, including women of color, low socioeconomic status, first generation Americans, heterosexuals, and lesbians. For lesbians, Thompson (1994) reported that growing up in a heterosexist culture was confusing and anxiety-provoking for women who felt that they did not fit the heterosexual mold. Some women, she suggested, began regimenting and decreasing their food intake to make up for the lack of control they felt surrounding their non-heterosexual feelings. Disordered eating also resulted as a means for reducing anger, dealing with isolation, and distracting oneself from pain. For many of the women, bingeing was a way to feel numb; it decreased anxiety, offered sedation, and induced sleep. These coping mechanisms were sustained because disordered eating was a way to keep painful feelings from immediate awareness. For the majority of women who binged, healing and recovery began only after the bingeing was terminated (Thompson, 1994).

As suggested by the Lesbian model in the current study, Thompson (1994) found that as the lesbians began to more positively accept their sexual identities, disordered eating behaviors decreased. Important as part of the healing process was for these women to find environments in which their sexual identities were embraced. Again, as found in the Lesbian model, connections with the GLB community and satisfying support systems were predictive of psychological health, which, in turn, was related to fewer concerns with body image.

Testing the Model in an Independent Sample

In an effort to determine whether the Lesbian model would fit for the heterosexual sample of women, confirmatory factor analyses and structural equation modeling were conducted on both the proposed and final Lesbian models. A number of factors may explain why neither one of the Lesbian models seems applicable to the heterosexual women, as suggested by the poor resultant factor loadings and fit indices. First, it makes conceptual sense that sexual identity factors may not be salient concerns to heterosexual women with respect to the development of disordered eating. Given the heterosexist society in which U.S. women develop their identities, it would seem unlikely that heterosexual women would experience stress about not being homosexual. Furthermore, two of the measured variables that comprised the LSI factor (i.e., connection to the LGB community and time "out") are arguably not appropriate markers of heterosexual identity development. Unfortunately, attempts to find an underlying Heterosexual Identity factor which paralleled the LSI factor were limited to variables assessed in this investigation

and were not supported statistically. As a result, neither of the Heterosexual models, once confirmed, contained a sexual identity variable.

Even after the removal of the sexual identity variable, neither of the Heterosexual models fit the independent sample data well. One explanation for the poor fits is that the models were too simplistic. Other salient factors, highlighted by previous research, were not included in the Heterosexual models. These potential variables, for example, could have addressed personality constructs, such as emotional restraint (e.g., Wonderlich, 1995) or coping resources (e.g., Shatford & Evans, 1986).

Another potential reason for the Heterosexual models' poor fit to the Lesbian model may have been the result of motivational factors. The heterosexual women were recruited from undergraduate courses and were offered extra credit for their participation. College students may only have chosen to complete the measures as a means for obtaining extra credit for their course and were subsequently less thoughtful about their responses. Conversely, lesbians may have been highly invested in the results of the study given this researcher's personal solicitations and desire to research health issues salient to the lesbian population.

Although the overall fit indices for the heterosexual sample were not above the ideal standards of good fit, it should be noted that the strengths of the pathways and the variance accounted for by both heterosexual models were similar to that of the results from the lesbian sample. This finding suggests that with the addition of another pathway, perhaps in the same place in the model as the LSI variable, the model might have fit equally well for the heterosexual sample. Because it is likely that the process of adopting

a heterosexual identity does not directly parallel the process of adopting a lesbian identity, perhaps a more meaningful construct would be one that reflects aspects of heterosexual sexuality, as opposed to heterosexual identity. Specifically, researchers have implicated a number of affective and behavioral factors related to comfort with sexuality for heterosexual women. For instance, a more positive sexual self-regard, higher sexual satisfaction, and involvement in a steady and satisfying relationship/marriage have been linked with lower body image concerns (Calandra, 2001; Friedman, Dixon, Brownell, Whisman, & Wilfley, 1999) and less dieting (Markey, Markey, & Birch, 2001).

Given the significant differences in age between the heterosexual and lesbian samples, it is possible that differences in the model fit indices are a reflection of developmental processes that occur over time. The addition of a heterosexual sexuality variable into the model may better account for some of the confounds related to age, such as comfort with sex, which likely increases over time with longer-term, steadier relationships. Not only were the women in the heterosexual sample significantly younger than those in the lesbian sample, the age-range was also more restricted.

Although attempts to fit the model to the sample of heterosexuals were not successful, this finding highlights the impact of using sexual orientation as a demographic variable when conducting body image and disordered eating investigations. The significance of the Lesbian model, given the omission of additional factors, speaks to the salience of the LSI factor's impact on Psychological Health, and potentially Disordered Eating. The current investigation, dubbed a second generation study by Striegel-Moore and Cachelin (2001), aids in identifying a variable eating disorder risk

factor in a subgroup of women, those who have questioned their heterosexuality and have adopted a lesbian identity.

Limitations of the Current Investigation

Although the findings from this investigation are noteworthy regarding the development of a lesbian sexual identity and the development of disordered eating, the limitations of the study need to be acknowledged. First, inherent in the use of self-report measures are concerns about the truth and accuracy of responding, especially regarding items that require retrospective answers. Given the low and non-significant relationships among social desirability scores and the other measured variables, however, a self-presentational response bias did not seem to impact responses significantly. Second, given the lesbian sample utilized for this study, generalizability to other lesbian samples is limited. Participants were recruited from across the United States and thus likely reflect a myriad of geographic and social influences (e.g., community norms of public displays of affection as a result of social climate). Furthermore, collecting data from the Internet limited the sample to those who had access to the world wide web and were purposefully invested in seeking out lesbian sites and postings.

A third limitation of collecting body image data on a "lesbian" sample relates to varying definitions of gay/lesbian identification. For instance, one of the study participants described herself as a "masculine butch-identified queer female." She stated that she does not like to identify as a "lesbian" because she "does not feel like a woman."

A fourth limitation relates not to what was assessed, but rather, what may have been omitted by this researcher. More specifically, for example, body image concerns

may have been influenced largely by health-related concerns, (e.g., weight gain as a side effect of medication or the loss of a breast due to breast cancer), or, as previously alluded to, gender identification issues. In addition, Disordered Eating in this study included measures of bulimic and binge eating symptoms. Hence, the non-inclusion of anorexic symptoms limits the definition of Disordered Eating as discussed in this investigation. Furthermore, it must be reiterated that the concurrent nature of the research design does not allow for conclusive causal statements.

Lastly, the demographics of lesbian and heterosexual samples differed significantly because of sampling methods. The heterosexual sample was largely a convenience sample of undergraduates, whereas the lesbian sample, in addition to consisting of undergraduate women, included lesbians from more geographically and economically diverse backgrounds. Hence, the significant differences in demographics between the lesbian and heterosexual samples limited the ability to explain differences in how the models fit, one reason being that age may have been a confounding variable and was not included as an independent variable in any of the models.

Implications for Counseling with Lesbians

Therapists working with individuals who are dealing with issues related to sexuality need to be reminded that during this time of transition and/or confusion, clients may be more prone to disturbances in psychological health. The “coming out” process and the adoption of a lesbian identity are inherently stressful periods of change (Falco, 1996). Therapists have the opportunity to affect positive growth by addressing client issues on a number of levels. First, they can provide resources for and encourage

connections to local GLB communities. In addition to the supportive nature of the therapeutic environment, the results of this study reinforce the notion that being comfortable with one's identity can provide a foundation for psychological health and protection from psychological distress (Ericson, 1968).

The “coming out” process is an essential part of developing a lesbian identity. Thompson (1996), through her work with lesbian clients, provides a framework for therapists which highlights the importance of addressing issues of grief and loss during the “coming out” process. Central to this work is the normalization of the sadness that may incur as women let go of a heterosexual lifestyle. An overview of this counseling model is provided because it offers a practical approach consistent with the findings of this investigation.

According to Thompson (1996), loss issues can relate to all of the following: (1) the rights and privileges afforded to those in the majority (e.g., marriage), (2) societal acceptance, (3) esteem from family and community, and (4) isolation from the heterosexual community. Through her clinical work, Thompson (1996) has developed a 5-stage model in which she applies the stages of loss to stages in the coming-out process. In Stage 1, therapists can help clients to accept the reality of the loss of their heterosexual identity and its privileges. Thompson (1996) warns therapists not to rush clients through this stage, nor to point out all the positive aspects of identifying as a lesbian. Rather, she suggests encouraging discussions and/or letter writing about expectations they had for heterosexual life.

The focus of Stage 2 is to help clients continue acknowledging the specifics of their losses and encourage finding ways to "fit in," such as by joining new social groups. Here, clients test out their degree of comfort in new settings within the GLB community. Confusion, anger, and resentment may surface during this stage. Thompson (1996) suggests that only by resolving negative feelings can women find their positive feelings.

Stage 3 involves feeling the pain of the loss and grieving. Though painful, the experience of sadness should replace the socialized tendency of denial, which often accompanies a loss. Helping clients let go of their ideals can be done with questions, such as "how does it feel to think of giving up this dream?"

Stages 4 and 5, which could hypothetically occur in linear fashion, typically do not. Stage 4 involves adjusting to life as a lesbian, whereas Stage 5 involves integrating lesbian life in both the lesbian community and broader society. Thompson (1996) suggests encouraging rituals to celebrate a "coming out" and to acknowledge the giving up a heterosexual identity. Stage 5, however, is not experienced by all lesbians. Some choose to socialize exclusively with lesbian groups, whereas others may reject the integration of lesbian social connections due to internalized homophobia. During this stage, counselors can help with adjustment of being gay in a "straight" world by providing reality checks about external homophobia.

Beyond the focus on identity development, the multidimensional etiology of body image concerns and disordered eating offers numerous avenues for counselor intervention. From individual therapy, to group counseling, and the presentation of workshops aimed at psychoeducation and the challenging of societal norms of beauty,

counselors have a wide array of options in selecting an effective intervention. At the individual level, empirically validated treatments for eating disorders include interpersonal therapy and cognitive-behavioral therapy, although other models, such as feminist approaches and dialectical behavior therapy also offer promise (Stein et al., 2001). Given the expansive literature on ED treatment, a comprehensive review is not within the scope of this discussion. The interested reader is directed to a recent “major contribution” to The Counseling Psychologist for an overview of current treatment approaches (Stein et al., 2001).

Future Research

The results of this investigation present an array of ideas for additional research, in addition to addressing the limitations of the current investigation. The question still exists regarding the generalizability of the model to other samples of lesbians who may not have access to or participate in lesbian groups on the Internet. In addition, this study could be replicated with lesbians with previous and current eating disorder diagnoses. Furthermore, little is known about the body image and eating concerns of women who classify themselves as bisexual. This review of literature highlights the fact that body image concerns and disordered eating are not yet understood in these subcultures and warrant further investigation.

Another logical extension of this study would be to conduct longitudinal investigations tracking changes associated with sexual identity, social supports, and internalized norms of beauty and attractiveness in an effort to better understand how these factors influence body image and disordered eating over time. How do markers of

the adoption of a lesbian sexual identity change over time and what influence do those changes have on social support networks and beliefs about attractiveness? Although the adoption of a lesbian sexual identity typically occurs in women's early 20s (Rust, 1997), the onset of body image consciousness and dieting behaviors typically occurs in adolescence. Hence, beginning to track young women prior to age 12 would serve to increase understanding of contributing variables and provide more immediate opportunities for prevention and intervention.

Additional research could be done regarding practical application of the finding that increased involvement in the GLB community, comfort with sexuality, and length of time out accounted for some of the variance in psychological health, which indirectly affected disordered eating. Programs developed to increase GLB involvement, for instance, might also enhance social support networks. Subsequently, researchers could evaluate the efficacy of programs designed to facilitate a stronger, more positive lesbian identity among women questioning their sexuality (e.g., support groups, workshops) and assess the impact of their growth on beliefs about attractiveness, body image concerns, and disordered eating.

Furthermore, researchers interested in the relationship between the adoption of a lesbian identity and beliefs about beauty and attractiveness might incorporate additional measures of internalized norms, beyond that of an internalization scale. Researchers (e.g., Myers et al., 1999) have posited that as women adopt a lesbian identity, they incorporate non-traditional appearance related markers as a means for identifying themselves as lesbians to other lesbians (e.g., cutting one's hair short). As suggested by the results of

this study which found no association between a more positive lesbian identity and less adherence to traditional U.S. beauty norms, an investigation into “traditional” lesbian beauty norms might yield more useful information for a sociocultural investigation into disordered eating etiology among lesbians.

Lastly, the significant demographic differences between the lesbian and heterosexual samples limited the conclusions drawn regarding the fits between the models. One way to address this concern in future research would be to include age as an independent predictor in the model of disordered eating. In addition, developing a heterosexual sexuality variable, as discussed in a previous section, might help to account for body image and/or disordered eating influences that may be influenced by attitudes and behaviors related to aspects of heterosexual sexual relationships.

Conclusion

After reviewing decades of eating disorder research, Striegel-Moore and Cachelin (2001) highlighted the need for additional “second-generation” studies that extend beyond identifying fixed eating disorder risk factors, such as gender. The results of this study on lesbians suggest that disordered eating risk factors include aspects of women’s sexual identity development. Furthermore, this study on lesbian sexuality contributes to the trend for more diversity in study samples. Although counseling psychologists have noted the void in ED research regarding multicultural populations, sexual orientation was omitted as a risk and/or protective factor for women in a focus on eating disorders in one of the field’s most highly regarded journals, The Counseling Psychologist, in its recent focus on the topic of eating disorders (September, 2001).

The Lesbian model developed in this study is an initial attempt to fill this void and highlights the potential affect of adopting a lesbian identity on disordered eating. Although feeling comfortable with one's lesbian identity, connecting to the GLB community, and "coming out" are unique experiences, common for some is that the trauma associated with these events contributes to disordered eating patterns (Thompson, 1994). Hence, not only does this model provide an initial attempt at understanding disordered eating among lesbians, it offers avenues for prevention and positive change.

Additionally, the Lesbian Model of Disordered Eating highlights the influence of sociocultural pressures to be thin in U.S. society. Even as lesbians solidify their sexual identity and shift from the desire to attract a man to a woman, they may not be free from the societal mandates of beauty and attractiveness that contribute to body image and eating concerns. The findings from this study support the notion that being socialized as a woman in a heterosexist, patriarchal society seems to set women up to be disappointed with their body-related appearances. Although some lesbians may not subscribe to traditional beauty norms, it appears that other factors, such as gender, may be more predictive of norm internalization than the adoption of a lesbian identity.

In summary, this study highlights the multidimensional etiology associated with the development of disordered eating. Using a lesbian sample offers new insights into risk factors that would not otherwise be gleamed without acknowledging the impact of sexual identity. Structural equation modeling allowed for the investigation of direct and indirect relationships among Lesbian Sexual Identity, Social Supports, Psychological Health, Internalization of Norms, Body Image Concerns, and Disordered Eating. As

previously discussed, the findings of this investigation offer direction for continued research and practical implications for prevention and treatment of disordered eating among lesbians.

APPENDIX A

Please answer the following questions honestly. Some of the questions may feel repetitive to you but it's very important that you answer every question.

1. Age: _____

2. If applicable, Gay, Lesbian, Bi-sexual (GLB) group: _____

2. Ethnicity/Race: _____ (1) Caucasian/White _____ (2) African-American/Black
 _____ (3) Hispanic American _____ (4) American Indian
 _____ (5) Asian American/Pacific Islander _____ (6) other: please specify

3. Personal Yearly Income: _____ (1) less than \$15,000 _____ (2) \$15,000 to \$24,999
 _____ (3) \$25,000 to \$34,999 _____ (4) \$35,000 to \$44,999
 _____ (5) \$45,000 to \$54,999 _____ (6) \$55,000 to \$64,999
 _____ (7) \$65,000 to \$74,999 _____ (8) more than \$75,000

4. Present height _____ feet, _____ inches

5. Present weight _____ pounds

6. Ideal weight _____ pounds

7. Current Relationship Status: _____ (1) single, not in a dating relationship
 _____ (2) single, dating a woman _____ (3) single, dating a man
 _____ (4) married to a woman _____ (5) married to a man
 _____ (6) partnered with a woman

8. If applicable, what is the length of your current relationship? _____ years, _____ months.

9. Please rate the extent to which you describe yourself as a "feminist."

never *sometimes* *always*
 1 2 3 4 5 6

10. Please indicate how you most describe your appearance.

Highly masculine *masculine* *slightly masculine* *slightly feminine* *feminine* *highly feminine*
 1 2 3 4 5 6

11. I consider my sexual orientation at the present time to be:

exclusively lesbian *bisexual* *exclusively heterosexual*
 1 2 3 4 5 6 7

12. Please rate how comfortable you feel with your sexual identity:

not comfortable at all *somewhat* *very comfortable*
 1 2 3 4 5 6 7

13. Please rate the approx. percentage (from 1-100) of people to whom you have disclosed your sexual identity, for each category: _____ (1) (from 1-100%) GLB friends _____ (2) (from 1-100%) heterosexual friends

_____ (3) (from 1-100%) family members _____ (4) (from 1-100%) co-workers/classmates

14. Number of dating relationships with women: _____

15. If applicable, how long have you considered yourself to be "out"? _____ years, _____ months

16. Please rate your sense of connectedness to and affiliation with the gay, lesbian, bi-sexual community in your area.

not at all affiliated/connected *somewhat* *highly affiliated/connected*
 1 2 3 4 5 6 7

SIDS

Please rate the extent you currently agree with the following statements, using this scale:

<i>strongly disagree</i>			<i>neutral</i>			<i>strongly agree</i>
1	2	3	4	5	6	7

21. My thoughts, feelings, and behaviors about my own sexuality are heterosexual.

1 2 3 4 5 6 7

2. I consider myself to be heterosexual.

1 2 3 4 5 6 7

3. I am comfortable with my heterosexual thoughts, feelings, and behaviors.

1 2 3 4 5 6 7

4. I am currently confused about my sexual identity.

1 2 3 4 5 6 7

5. There is something about my thoughts, feelings, and or/behaviors that could be called lesbian/gay.

1 2 3 4 5 6 7

6. I am uncomfortable with current thoughts, feelings, and/or behaviors that could be called lesbian/gay.

1 2 3 4 5 6 7

7. I may be homosexual and may not be heterosexual.

1 2 3 4 5 6 7

8. I am feeling alienation from other people.

1 2 3 4 5 6 7

9. I am weighing the costs and benefits of accepting a lesbian/gay identity.

1 2 3 4 5 6 7

10. I am probably lesbian/gay.

1 2 3 4 5 6 7

11. I am beginning to disclose my sexual identity to other people.

1 2 3 4 5 6 7

12. I am aware of society's negative views about lesbians and gays and am learning to tolerate them.

1 2 3 4 5 6 7

13. I am increasing personal contact with other lesbians and/or gays.

1 2 3 4 5 6 7

14. My identity as a lesbian/gay woman is increasing.

1 2 3 4 5 6 7

15. I am increasing disclosure of my sexual identity to heterosexual individuals.

1 2 3 4 5 6 7

16. I prefer to be lesbian/gay rather than homosexual.

1 2 3 4 5 6 7

17. I identify strongly with the lesbian/gay community.

1 2 3 4 5 6 7

18. I feel both pride about being lesbian/gay and anger towards heterosexuals as a group.

1 2 3 4 5 6 7

19. I have a strong sense of my lesbian/gay identity, but it is only part of who I am.

1 2 3 4 5 6 7

20. I feel pride in being a gay/lesbian woman and value people, regardless of whether they are heterosexual or heterosexual.

1 2 3 4 5 6 7

21. I feel less anger towards heterosexuals than I have in the past.

1 2 3 4 5 6 7

SDS

Please indicate whether the following statements describe you by answering true or false:

	TRUE	FALSE
1. Is it sometimes hard for me to go on with my work if I am not encouraged.	0	1
2. I sometimes feel resentful when I don't get my way.	0	1
3. There have been times when I felt like rebelling against people in authority even though I knew they were right.	0	1
4. No matter who I'm talking to, I'm always a good listener.	0	1
5. There have been occasions when I took advantage of someone.	0	1
6. I'm always willing to admit it when I make a mistake.	0	1
7. Sometimes I try to get even rather than forgive and forget.	0	1
8. I am always courteous, even to people who are disagreeable.	0	1
9. I have never been irked when people expressed ideas very different from my own.	0	1
10. There have been times when I was quite jealous of the good fortune of others.	0	1
11. I am sometimes irritated by people who ask favors of me.	0	1
12. I have never deliberately said something that hurt someone's feelings.	0	1

RSES

Below is a series of statements concerning how people feel about themselves. Please indicate the degree to which you agree with each of these statements using the following scale. **OVER THE LAST MONTH:**

	Strongly Disagree	Disagree	Agree	Strongly Agree
1. I feel that I am a person of worth, at least on an equal plane with others.	1	2	3	4
2. I feel that I have a number of good qualities.	1	2	3	4
3. All in all, I am inclined to feel that I am a failure.	1	2	3	4
4. I am able to do things as well as most other people.	1	2	3	4
5. I feel I do not have much to be proud of.	1	2	3	4
6. I take a positive attitude toward myself.	1	2	3	4
7. On the whole, I am satisfied with myself.	1	2	3	4
8. I wish I could have more respect for myself.	1	2	3	4
9. I certainly feel useless at times.	1	2	3	4
10. At times I think I am no good at all.	1	2	3	4

BPSS-R

Using the scale provided, please rate how satisfied you are with each body part listed below,

OVER THE LAST MONTH:

	Extremely Dissatisfied	1	2	3	4	5	6	Extremely Satisfied
1. Weight		1	2	3	4	5	6	
2. Hair		1	2	3	4	5	6	
3. Complexion		1	2	3	4	5	6	
4. Overall Face		1	2	3	4	5	6	
5. Arms		1	2	3	4	5	6	
6. Stomach		1	2	3	4	5	6	
7. Buttocks		1	2	3	4	5	6	
8. Hips		1	2	3	4	5	6	
9. Upper Thighs		1	2	3	4	5	6	
10. General Muscle Tone		1	2	3	4	5	6	

MBSRQ

Using the scale provided, please indicate the extent to which each statement below pertains to you personally, **OVER THE LAST MONTH:**

	1 Definitely Disagree	2 Mostly Disagree	3 Neither Agree nor Disagree	4 Mostly Agree	5 Definitely Agree					
1. My body is sexually appealing.						1	2	3	4	5
2. I like my looks just the way they are.						1	2	3	4	5
3. Most people would consider me good looking.						1	2	3	4	5
4. I like the way I look without my clothes on.						1	2	3	4	5
5. I like the way my clothes fit me.						1	2	3	4	5
6. I dislike my physique.						1	2	3	4	5
7. I am physically unattractive.						1	2	3	4	5

SSQ

The following questions ask about people in your life who provide you with help or support. Each question has 2 parts.

For the first part – list up to 8 people you know, excluding yourself, who you can count on for help or support. Write the person's initials and their relationship to you. If you have no support, check the words "no one".

For the second part – rate how satisfied you are with the overall support you have, even if you check "no one".

For example, *who do you know whom you can trust with information that could get you in trouble?*

_____ no one

- | | |
|-----------------|------------------|
| 1) TM – brother | 5) LM - employer |
| 2) LM – friend | 6) _____ |
| 3) RS – friend | 7) _____ |
| 4) TN – father | 8) _____ |

How satisfied are you with these circumstances? **Very** **Fairly** **A little** **A little** **Fairly** **Very**
Dissatisfied **Satisfied**
1 **2** **3** **4** **5** **6**

1. Whom can you really count on when you need help?

_____ no one

- | | |
|----------|----------|
| 1) _____ | 5) _____ |
| 2) _____ | 6) _____ |
| 3) _____ | 7) _____ |
| 4) _____ | 8) _____ |

2. How satisfied are you with these circumstances? **Very** **Fairly** **A little** **A little** **Fairly** **Very**
Dissatisfied **Satisfied**
1 **2** **3** **4** **5** **6**

3. Whom can you really count to help you feel more relaxed when you are under pressure or tense?

_____ no one

- | | |
|----------|----------|
| 5) _____ | 5) _____ |
| 6) _____ | 6) _____ |
| 7) _____ | 7) _____ |
| 8) _____ | 8) _____ |

4. How satisfied are you with these circumstances? **Very** **Fairly** **A little** **A little** **Fairly** **Very**
Dissatisfied **Satisfied**
1 **2** **3** **4** **5** **6**

5. Who accepts you totally, including your best and worst points?

_____ no one

1) _____ 5) _____
2) _____ 6) _____
3) _____ 7) _____
4) _____ 8) _____

6. How satisfied are you with these circumstances?	Very Dissatisfied 1	Fairly Dissatisfied 2	A little 3	A little 4	Fairly Satisfied 5	Very 6
--	---------------------------	-----------------------------	---------------	---------------	--------------------------	-----------

7. Whom can you really count on to care about you, regardless of what is happening to you?

_____ no one

1) _____	5) _____
2) _____	6) _____
3) _____	7) _____
4) _____	8) _____

8. How satisfied are you with these circumstances?	Very Dissatisfied	Fairly Dissatisfied	A little Dissatisfied	A little Satisfied	Fairly Satisfied	Very Satisfied
	1	2	3	4	5	6

9. Who can you really count on to help you feel better when you are feeling generally down-in-the-dumps?

_____ no one

1) _____	5) _____
2) _____	6) _____
3) _____	7) _____
4) _____	8) _____

10. How satisfied are you with these circumstances?	Very Dissatisfied	Fairly Dissatisfied	A little Dissatisfied	A little Satisfied	Fairly Satisfied	Very Satisfied
	1	2	3	4	5	6

11. Whom can you count on to console you when you are very upset?

_____ no one

1) _____	5) _____
2) _____	6) _____
3) _____	7) _____
4) _____	8) _____

12. How satisfied are you with these circumstances?	Very Dissatisfied	Fairly Dissatisfied	A little Dissatisfied	A little Satisfied	Fairly Satisfied	Very Satisfied
	1	2	3	4	5	6

BSQ

How you have been feeling about your appearance **OVER THE LAST MONTH?** Please indicate how you have been feeling using the following scale.

1	2	3	4	5	6
NEVER	RARELY	SOME-TIMES	OFTEN	VERY OFTEN	ALWAYS

IN THE LAST MONTH:

1. Have you been so worried about your shape that you have been feeling that you ought to diet?	1	2	3	4	5	6
2. Have noticed the shape of other women and felt that your own shape compared unfavorably?	1	2	3	4	5	6
3. Has being naked, such as when taking a bath, made you feel fat?	1	2	3	4	5	6
4. Has eating sweets, cakes, or other high calorie food made you feel fat?	1	2	3	4	5	6
5. Have you felt excessively large and rounded?	1	2	3	4	5	6
6. Have you felt ashamed of your body?	1	2	3	4	5	6
7. Has seeing your reflection (e.g., in a mirror or shop window) made you feel bad about your shape?	1	2	3	4	5	6
8. Have you been particularly self-conscious about your shape when in the company of other people?	1	2	3	4	5	6
9. Have you found yourself brooding about your shape?	1	2	3	4	5	6
10. Has seeing thin women made you feel badly about your own shape?	1	2	3	4	5	6

VAMS

Please circle the number for each item that best describes **how you have been feeling during this PAST MONTH:**

	Not at All	A Little	Moderately	Quite A Bit	Extremely
1. Sad or Depressed	1	2	3	4	5
2. Happy	1	2	3	4	5
3. Shameful	1	2	3	4	5
4. Guilty	1	2	3	4	5
5. Confused	1	2	3	4	5
6. Anxiety	1	2	3	4	5
7. Stressed	1	2	3	4	5

BULIT-R

Please answer each question below by circling the response that best describes what you believe to be true about yourself:

1. I am satisfied with my eating patterns.

- a. agree
- b. neutral
- c. disagree a little
- d. disagree
- e. disagree strongly

2. Would you presently call yourself a “binge eater”?

- a. yes, absolutely
- b. yes
- c. yes, probably
- d. yes, possibly
- e. no, probably not

3. Do you feel you have control over the amount of food you consume?

- a. most or all of the time
- b. a lot of the time
- c. occasionally
- d. rarely
- e. never

4. I am satisfied with the shape and size of my body.

- a. frequently or always
- b. sometimes
- c. occasionally
- d. rarely
- e. seldom or ever

5. When I feel that my eating behavior is out of control, I try to take rather extreme measures to get back on course (strict dieting, fasting, laxatives, diuretics, self-induced vomiting or vigorous exercise).

- a. always
- b. almost always
- c. frequently
- d. sometimes
- e. never or my eating behavior is never out of control

6. I use laxatives or suppositories to help control my weight.

- a. once a day or more
- b. 3-6 times a week
- c. 1-2 times a week
- d. 2-3 times a month
- e. once a month or less (or never)

7. I am obsessed about the size and shape of my body.

- a. always
- b. almost always
- c. frequently
- d. sometimes
- e. seldom or ever

8. There are times when I rapidly eat a very large amount of food.

- a. more than twice a week
- b. twice a week
- c. once a week
- d. 2-3 times a month
- e. once a month or less (or never)

9. How long have you been binge eating (eating uncontrollably to the point of stuffing yourself)?

- a. I don't binge eat
- b. less than 3 months
- c. 3 months – 1 year
- d. 1-3 years
- e. 3 or more years

10. Most people I know would be amazed if they knew how much food I can consume at one sitting.

- a. without a doubt
- b. very probably
- c. probably
- d. possibly
- e. no

11. I exercise in order to burn calories.

- a. more than 2 hours a day
- b. about 2 hours a day
- c. more than 1 hour a day
- d. one hour or less a day
- e. I exercise but not to burn calories (or I don't exercise)

12. Compared with women your age, how preoccupied are you about your weight and body shape?

- a. a great deal more than average
- b. much more than average
- c. more than average
- d. a little more than average
- e. average or less than average

13. I am afraid to eat anything for fear that I won't be able to stop.

- a. always
- b. almost always
- c. frequently
- d. sometimes
- e. seldom or never

14. I feel tormented by the idea that I am fat or might gain weight.

- a. always
- b. almost always
- c. frequently
- d. sometimes
- e. seldom or never

15. How often do you intentionally vomit after eating?

- a. 2 or more times a week
- b. once a week
- c. 2-3 times a month
- d. once a month
- e. less than once a month (or never)

16. I eat a lot of food even when I'm not even hungry.

- a. very frequently
- b. frequently
- c. occasionally
- d. sometimes
- e. seldom or never

17. My eating patterns are different from the eating patterns of most people.

- a. always
- b. almost always
- c. frequently
- d. sometimes
- e. seldom or never

18. After I binge eat I turn to one of several strict methods to try to keep from gaining weight (vigorous exercise, strict dieting, fasting, self-induced vomiting, laxatives, or diuretics).

- a. never (or I don't binge eat)
- b. rarely
- c. occasionally
- d. a lot of the time
- e. most or all of the time

19. I have tried to lose weight by fasting or going on strict diets.

- a. never or not in the past year
- b. once in the past year
- c. 2-3 times in the past year
- d. 4-5 times in the past year
- e. most or all of the time

20. I exercise vigorously and for long periods of time in order to burn calories.

- a. average or less than average
- b. a little more than average
- c. more than average
- d. much more than average
- e. great deal more than average

21. When engaged in an eating binge, I tend to eat foods that are high in carbohydrates (sweets and starches).

- a. always
- b. almost always
- c. frequently
- d. sometimes
- e. seldom (or I don't binge)

22. Compared to most people, my ability to control my eating behavior seems to be:

- a. greater than others' ability
- b. about the same
- c. less
- d. much less
- e. I have absolutely no control

23. I would presently label myself a "compulsive eater" (one who engages in episodes or uncontrolled eating).

- a. absolutely
- b. yes
- c. yes, probably
- d. yes, possibly
- e. no, probably, not

24. I hate the way my body looks after I eat too much.

- a. seldom or never
- b. sometimes
- c. occasionally
- d. a lot of the time
- e. most or all of the time

25. When I am trying to keep from gaining weight, I feel that I have to resort to vigorous exercise, strict dieting, fasting, self-induced vomiting, laxatives, or diuretics.

- a. never
- b. rarely
- c. occasionally
- d. a lot of the time
- e. most or all of the time

26. Do you believe that it is easier for you to vomit than it is for most people?

- a. yes, it's no problem at all for me
- b. yes, it's easier
- c. yes, it's a little easier
- d. about the same
- e. no, it's less easy

27. I use diuretics (water pills) to help control my weight.

- a. never
- b. seldom
- c. sometimes
- d. frequently
- e. very frequently

28. I feel that food controls my life.

- a. always
- b. almost always
- c. frequently
- d. sometimes
- e. seldom or never

29. I try to control my weight by eating little or not food for a day or longer.

- a. never
- b. seldom
- c. sometimes
- d. frequently
- e. very frequently

30. When consuming a large quantity of food, at what rate of speed do you usually eat?

- a. more rapidly than most people have ever eaten in their lives
- b. a lot more rapidly than most people
- c. a little more rapidly than most people
- d. about the same rate as most people
- e. more slowly than most people (or not applicable)

31. I use laxatives or suppositories to help control my weight.

- a. never
- b. seldom
- c. sometimes
- d. frequently
- e. very frequently

32. Right after I binge eat I feel:

- a. so fat and bloated I can't stand it
- b. extremely fat
- c. fat
- d. a little fat
- e. okay about how my body looks (or I never binge eat)

33. Compared to other people of my sex, my ability to always feel in control of how much I eat is:

- a. about the same or greater
- b. a little less
- c. less
- d. much less
- e. a great deal less

34. In the last 3 months, on the average how often did you binge eat (eat uncontrollably to the point of stuffing yourself)?

- a. once a month or less (or never)
- b. 2-3 times a month
- c. once a week
- d. twice a week
- e. more than twice a week

35. Most people I know would be surprised at how fat I look after I eat a lot of food.

- a. yes, definitely
- b. yes
- c. yes, probably
- d. yes, possibly
- e. no, probably not (or I never eat a lot of food)

36. I use diuretics (water pills) to help control my weight.

- a. 3 times a week or more
- b. once or twice a week
- c. 2-3 times a month
- d. once a month
- e. never

BAA-R

Listed below are statements about the importance of attractiveness and fitness in our society. For each item, please circle the response that best describes what you believe is true. It is important that you respond to all items and that you answer them honestly as they apply to you.

1	2	3	4	5	6	7
Strongly Disagree	Disagree	Somewhat Disagree	Uncertain	Somewhat Agree	Agree	Strongly Agree

1. People would prefer to date thin rather than overweight women.	1	2	3	4	5	6	7
2. It is not that important for overweight women to spend money on clothes since they will look unattractive no matter what they wear.	1	2	3	4	5	6	7
3. A woman with an attractive face will not get very far in life without a thin body.	1	2	3	4	5	6	7
4. Overweight women lack self-control and discipline.	1	2	3	4	5	6	7
5. The heavier a woman is, the less attractive she is.	1	2	3	4	5	6	7
6. Being physically fit and in-shape is directly related to attractiveness.	1	2	3	4	5	6	7
7. Physically fit and in-shape women have a greater sense of well-being.	1	2	3	4	5	6	7
8. Thinness represents the current beauty ideal for women.	1	2	3	4	5	6	7
9. Attractive women are smarter than unattractive women.	1	2	3	4	5	6	7
10. The more physically fit and in-shape a women is, the more likely it is she will have a romantic partner.	1	2	3	4	5	6	7
11. Attractive women are more interesting and outgoing than unattractive women.	1	2	3	4	5	6	7
12. It is important for women to be physically fit and in-shape.	1	2	3	4	5	6	7
13. Overweight women should be embarrassed by how they look.	1	2	3	4	5	6	7
14. Attractive women lead more fulfilling lives than unattractive women.	1	2	3	4	5	6	7
15. The thinner a women is the more attractive she is.	1	2	3	4	5	6	7
16. Attractiveness increases the likelihood of professional success.	1	2	3	4	5	6	7
17. A physically fit and in-shape body reflects the beauty ideal for women.	1	2	3	4	5	6	7
18. Physically fit and in-shape women have more self-confidence.	1	2	3	4	5	6	7
19. Women who are physically fit and in-shape have more fun than those who are not.	1	2	3	4	5	6	7

CES-D

INSTRUCTIONS FOR QUESTIONS: Below is a list of the ways you might have felt or behaved. Please indicate how often you have felt this way **during the past MONTH.**

	0 Rarely or None of the Time	1 Some or a Little of the Time	2 Occasionally or a Moderate Amount of Time	3 Most or All of the Time
<u>During the past MONTH:</u>				
1. I was bothered by things that usually don't bother me.	0	1	2	3
2. I did not feel like eating; my appetite was poor.				
3. I felt that I could not shake off the blues even with help from my family or friends.				
4. I felt that I was just as good as other people.	0	1	2	3
5. I had trouble keeping my mind on what I was doing.				
6. I felt depressed.				
7. I felt that everything I did was an effort.	0	1	2	3
8. I felt hopeful about the future.				
9. I thought my life had been a failure.				
10. I felt fearful.	0	1	2	3
11. My sleep was restless.				
12. I was happy.				
13. I talked less than usual.	0	1	2	3
14. I felt lonely.				
15. People were unfriendly.				
16. I enjoyed life.	0	1	2	3
17. I had crying spells.				
18. I felt sad.				
19. I felt that people dislike me.				
20. I could not get "going."	0	1	2	3

1. How often do you binge eat?

- (1) Never, (do not answer questions 2-9 on this scale)
- (2) once or twice a month
- (3) once a week
- (4) almost every day

2. What is the average length of a binge eating episode?

- (1) less than 15 minutes
- (2) 15 minutes to one hour
- (3) one hour to four hours
- (4) more than four hours

3. Which of the following statements best applies to your binge eating?

- (1) I eat until I have had enough to satisfy me
- (2) I eat until my stomach feels full
- (3) I eat until my stomach is painfully full
- (4) I eat until I can't eat anymore

4. Do you ever vomit after a binge?

- (1) never
- (2) sometimes
- (3) usually
- (4) always

5. Which of the following best applies to your eating behavior when binge eating?

- (1) I eat more slowly than usual
- (2) I eat about the same as I usually do
- (3) I eat very rapidly

6. How much are you concerned about your binge eating?

- (1) not bothered at all
- (2) bothers me a little
- (3) moderately bothered
- (4) a major concern

7. Which best describes your feelings during a binge?

- (1) I feel that I could control the eating if I chose
- (2) I feel that I have at least some control
- (3) I feel completely out of control

8. Which of the following describes your feelings after a binge?

- (1) I feel fairly neutral, not too concerned
- (2) I am moderately upset
- (3) I hate myself

9. Which most accurately describes your feelings after a binge?

- (1) not depressed at all
- (2) mildly depressed
- (3) moderately depressed
- (4) very depressed

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